THE FIELD GUIDE TO

LAKE MONSTERS, SEA SERPENTS,

AND OTHER MYSTERY DENIZENS OF THE DEEP

LOREN COLEMAN
AND PATRICK HUYGHE

ILLUSTRATIONS BY HARRY TRUMBORE AND MARK LEE ROLLINS

The Field Guide to Lake Monsters, Sea Serpents, and Other Mystery Denizens of the Deep

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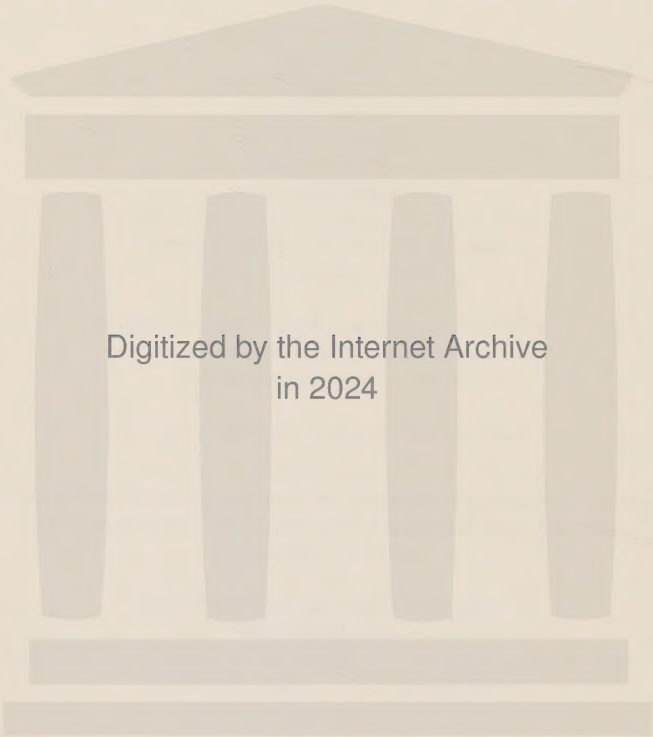
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"Your modern man would rather disbelieve something than believe it. He likes to think he is cynical and hard-boiled, whereas he is the most credulous creature ever made. When he can't understand a thing, like astronomy, or relativity, or finance, he believes anything you care to tell him, if you tell him with sufficient scientific and financial trimmings. But the trouble is he can understand a sea serpent. He can visualize it. Therefore, he disbelieves it. His disbelief flatters his vanity, makes him think he is a superior fellow. Well, it doesn't make him a superior fellow. Any fool can disbelieve in sea serpents . . ."

—Archie Wills, editor of the *Victoria Daily Times*, October 11, 1933

Introduction

The Unknown Unknown

5

At least half of the world's species remain unknown to science. Estimates of the total number of species on Earth range from a conservative three million to as many as ten million. But only about 1.5 million species have been discovered since Swedish biologist Carolus Linnaeus (Carl von Linné) first established his classification system for living things some 250 years ago.

Those numbers are for the planet as a whole. Even more inadequate is our knowledge of life in the waters of this planet, which cover 71 percent of the globe's surface. Take the deep sea, for example. Until a few decades ago, the deep sea was thought to be nearly devoid of life. But new studies of the "lost world" suggest that it alone may harbor another ten million undiscovered species, according to Frederick Grassle, director of Rutgers University's Institute of Marine and Coastal Sciences. Although that figure is a controversial one—other experts put the estimate at no more than half a million—what seems certain is that the deep sea, and indeed all water on this planet, is a habitat teeming with life, vast numbers of it unknown.

Each year, more than a hundred new species are discovered in the world's oceans. Many of these new species are tiny (yet big

enough for us to see without a microscope). But some recently discovered species are considerably larger. In fact, a new species longer than about six feet is discovered every five years or so in the oceans. Charles Paxton, an aquatic ecologist at the Animal Behaviour Research Group at Oxford University, bases that figure on a statistical analysis of past marine discoveries.

Paxton's groundbreaking 1998 paper, "A cumulative species description curve for large open water marine fauna," appeared in the *Journal of the Marine Biological Association of the United Kingdom*. In it, Paxton essentially tried to determine how many large marine animals remained to be discovered. He used a statistical technique invented in 1943 by British statistician Ronald Fisher and now widely used by geologists and ecologists to estimate the diversity of populations (of, say, fossils or beetles). The technique allows statisticians to hypothesize about the size and makeup of a population, based on only a small sample.

Starting with the tenth edition of Linnaeus's *Systema Naturae*, which was published in 1758 and which identified 23 marine species of more than six feet, Paxton found that by 1995, the number of "large" species discoveries had reached 217. He noted, however, that each consecutive year the number of new species found had dropped. Extrapolating on the curve produced by the data from 1830 to 1995, Paxton estimated that, at most, there are some 47 new large species still waiting to be discovered, at about the current rate of one new species described every 5.3 years. Paxton believed that the new discoveries would most likely be cetaceans, the order of marine mammals that includes whales, dolphins, and porpoises, but he told *The Economist* for November 28, 1998, that he would be happy with "a couple of new, totally weird sharks."

Three years later, Paxton updated his findings in a paper called "Predicting Pelagic Peculiarities: Some Thoughts on Future Discoveries in the Open Seas," published in 2001 in a specialty jour-

nal entitled *Dracontology: Being an Examination of Unknown Aquatic Animals*. In it, Paxton revised his original figures to 220 species discoveries, including the megamouth shark and the beaked whale *Mesoplodon peruvianus*. Of these, 119 were first described by science (and thus officially accepted as "new") between 1830 and 2000. Paxton's new analysis of data and discoveries convinced him that 51 new species still await discovery.

What surprises could some 50 new species discoveries reveal? A Sea Serpent? A Lake Monster? Considering what the waters have revealed in the recent past, anything is possible.

The Once Unknown

Of course, long before science discovers an animal, the locals often know of it, even if it is only whispered about or recounted in local folklore. Cryptozoologists, or those who study mystery animals, call those animals unrecognized by Western science "cryptids." Of course, science has acknowledged the existence of most animals on this planet without much fanfare. Dolphins, known from antiquity by the Greeks, are a good example. But many others, such as the giant squid and the megamouth shark, were regarded as "Sea Monsters" until they were captured and classified by science. Likewise, there is little doubt that many of today's mysteries of the deep involve species that have not yet been formally named and documented. (Conforming to the accepted style among most cryptozoologists, we capitalize the words Lake Monster and Sea Serpent, as well as individual cryptid names, throughout this book. For further information, please see our Note on Style on page 303. For information on our sources, please see our extensive Bibliography starting on page 341.)

We have selected a handful of cryptozoological success stories of the aquatic kind to set the stage for the controversial material that forms the heart of this volume. One would think that the bigger the creature, the easier and quicker it would be for an animal to make the transition from a cryptozoological unknown to a known zoological species. Not so, as the following examples illustrate.

KRAKENS AWAKE

The giant squid—once known as the mythical Kraken—was considered an absurd fiction until indisputable physical evidence of its existence became available in the 1870s. Until then, those who claimed to have seen it were often ridiculed.

Science did not even consider the animal's existence until the 1840s, when Danish zoologist Johan Japetus Steenstrup took up the subject, looking for reports in printed sources. In an indifferently received 1847 lecture to the Society of Scandinavian Naturalists, he took note of reports of beach strandings of giant squid going back to 1639, when one was found on an Icelandic beach. In 1853, after Jutland fishermen caught a giant squid and cut it up into pieces to use for bait, Steenstrup managed to secure the pharynx and the beak. In a scientific paper published in 1857, he described the remains and gave the giant squid its scientific name, *Architeuthis*. Even so, his colleagues remained skeptical, and as late as 1861, when the crew of the French gunboat *Alecton* encountered and tried to capture a specimen in the Canary Islands, Steenstrup's report was shrugged off and ignored. A member of the French Academy of Sciences exclaimed that giant squid, along with Sea Serpents, amounted to a "contradiction of the great laws of harmony and equilibrium which have sovereign rule over living nature."

But the sneering stopped the following decade, after a series of

strandings in Labrador and Newfoundland. In a particularly crucial incident, a fisherman and his son spotted a giant squid off Great Bell Island, near St. John's, Newfoundland, in October 1873. They cut off a tentacle ten feet from the body and showed it to Alexander Murray of the Geological Commission of Canada. Murray deduced that the whole tentacle must have been 35 feet long and the creature to which it was attached measured some 60 feet long and 5 to 10 feet across.

The largest documented giant squid specimen was found on a New Zealand beach in 1880; it measured 65 feet long, with most of that length (up to about 40 feet) taken up by tentacles. But truly gigantic squids—bigger than any found stranded yet—may survive in the deepest parts of the ocean, and may be only occasionally seen. Intriguingly, there are some eyewitness reports of squid being as long as 90 feet in length.

Other large, unknown squid have been discovered up to recent times. On December 21, 2001, biologist Michael Vecchione of the National Marine Fisheries Service and the National Museum of Natural History in Washington, D.C., described in the journal *Science* a new species of enormous squid that grows 23 feet long. Instead of having 8 arms and 2 tentacles, the new squid has 10 appendages that all look alike. The new animal, which lives more than 3,000 feet under the ocean, has baffled scientists with what Vecchione calls its "strange looks and weird behavior." These squid have been spotted all over the world—in the Gulf of Mexico and in the Atlantic, Pacific, and Indian oceans—by undersea explorers using specially designed craft.

Vecchione, who put together observations from several scientists working in various countries, said that no one has captured a specimen of the odd squid yet, so it has not been named. "This is well beyond a new species," he said. "New species are a dime a dozen. This is fundamentally different. The really long skinny arms are so much

longer than the squid's body. We don't know of any cephalopod that has arms like that."

Vecchione said that the squid join an array of unusual creatures being spotted for the first time as improved technology makes underwater exploration more common. "I think there are a lot of really strange things down there," he told *Science*. "Every time someone goes down there and looks, they find something really strange. It's Eureka time."

LIVING FOSSILS

The coelacanth (*Latimeria chalumnae*) is the darling of cryptozoology, a true living fossil. Its story demonstrates that unknown, undiscovered, or at least long-thought-extinct animals can still be found—especially in the oceans.

The coelacanth is a lobe-finned fish that first appeared during the Devonian Period, some 400 million years ago. Its body color varies from bright blue to brown, and it produces large amounts of oil and slime. Fossils found in many parts of the world indicate that various types of coelacanths once inhabited lakes, swamps, inland seas, and oceans. Until 1938, paleontologists thought that the coelacanth had become extinct about 65 million years ago, when the dinosaurs disappeared.

The first "modern" coelacanth was brought up in a net by Captain Hendrick Goosen of the trawler *Nerine*, while fishing the coastal waters of the Indian Ocean, near Cape Town, South Africa. On December 23, 1938, Goosen took his catch to a local fish market and called Marjorie Courtenay-Latimer, curator and taxidermist at the East London Museum, northeast of Cape Town, to look over his haul, as she often did for any unusual specimens for her collection.

Courtenay-Latimer wished the crew a Merry Christmas and was about to leave when she saw a blue fin on "the most beautiful fish I had ever seen, five feet long, and a pale mauve blue with iridescent silver markings." She talked a taxi driver into taking the smelly, 127-pound fish back with her to the museum, and there identified it as a coelacanth.

Typical of the stubbornness of orthodox science, Courtenay-Latimer's museum director in East London was not impressed with the find and rejected it as a common grouper. But the leading South African ichthyologist (one who studies fish), J. L. B. Smith of Rhodes University, Grahamstown, later confirmed Courtenay-Latimer's identification. Smith, who was on Christmas holiday, was not able to confirm that it was a coelacanth firsthand until after a taxidermist had thrown away all of the important internal organs to mount what would turn out to be the "catch of the century."

The story of the coelacanth's "discovery" does not end there, however. With no internal organs left from the East London specimen, many questions remained unanswered. Smith was obsessed with finding a second intact specimen. Finally, on December 21, 1952, fourteen years after the discovery of the first living coelacanth, lightning struck again while Smith was on another Christmas holiday. Captain Eric Hunt, a relocated British fisherman who had attended one of Smith's coelacanth lectures and had also become obsessed with locating another coelacanth, was returning to the port of Mutsamudu on the Comoran island of Anjouan, when Ahamadi Abdallah, a Comoran who was carrying a hefty bundle, approached him. Abdallah had pulled in by hand what the locals called a *gombessa*, a large fish that turned up on the Comoran lines now and then. And so it was that the second coelacanth was found.

Years later, ichthyologists were shocked to learn that the local islanders had been catching and eating these "living fossils" for gen-

erations. Since then, more than 200 coelacanths from the Comoros have been caught and studied. Most natural-history museums now have a mounted specimen on exhibit.

Intriguingly, this fossil fish has been back in the news with several recent rediscoveries. To the surprise of Western scientists at least, a second population of coelacanths was discovered in the late 1990s off the coast of Indonesia, some 7,000 miles from its only known locations near Madagascar and South Africa. Again, local people knew about them all along. And where was the first specimen of this new population found? In a fish market, just like the 1938 specimen.

This new population has now been identified by at least two specimens caught off of North Sulawesi, Indonesia. Mark Erdmann, a marine biologist attached to the University of California at Berkeley, on a honeymoon trip to the area in September 1997, was investigating a coral-reef research site, when his wife, Arnaz Mehta, spotted a strange fish being wheeled into the fish market. Recognizing it as a coelacanth, they snapped a picture of it before it was sold. Assuming the fish was already known in Indonesia, the two later posted the picture on their honeymoon website. As soon as he saw it, E. K. Balon of the University of Guelph, a longtime coelacanth specialist, urged Erdmann to withdraw the picture and pursue further funding to confirm a second specimen.

Once the National Geographic Society and the Smithsonian Institution had provided funding, Erdmann's investigation turned up reports of a large, rare fish, up to six feet long and very heavy. It was known locally as *raja laut*, "king of the sea." Finally, at sunrise on July 30, 1998, Om Lameh Sonathan and his crew of ten fishermen netting for deepwater shark off the young volcanic island of Manado Tua, caught and delivered a *raja laut* to Erdmann. The coelacanth remained alive long enough for Erdmann to film it swimming for three hours before freezing it for later analysis.

Erdmann and his coauthors, Roy Caldwell and M. Kasim Moosa,

reported their remarkable discovery in the September 24, 1998, issue of the influential British journal *Nature*. This new population appears completely isolated from the Comoran coelacanths. The observed specimens appear identical to the Comoran coelacanth, *Latimeria chalumnae,* except that they are brown rather than blue and evince gold flecks on their sides.

Two other perhaps distinct native populations of coelacanths have also been discovered. One is based on the capture of two specimens from deep-sea nets near Toliara, Madagascar, in 1995 and 1996/7. The other involves a videotape shot in October 2000 by South African diver Pieter Venter of three (or possibly six) specimens of a distinct, native population off Sodwana, South Africa. These, however, may be strays or satellite colonies of the original Comoran rediscovery. But no matter, what's important here is that the 65-million-year-old coelacanth is definitely not extinct.

MEGAMOUTH

The megamouth shark was unknown until 1976, when a Naval Undersea Center team from the Hawaii Laboratory made a chance catch. They were working around the Hawaiian Islands, spending a few days aboard a research vessel and carrying out surveys in the deep waters. Two large parachutes, dropped overboard to a depth of 500 feet, served as sea anchors. On the day of the team's departure, they hauled in the parachutes, only to discover that they had caught a gigantic shark. It measured 14.5 feet in length and weighed 1,650 pounds. Leighton R. Taylor, director of the University of Hawaii's Waikiki Aquarium, recognized it as a heretofore-unsuspected new species.

The newspapers soon dubbed the creature Megamouth, due to its extremely large mouth; it opens over 4½ feet wide and extends

back behind the shark's eyes. Taylor and his colleagues incorporated the name Megamouth in the species's 1983 scientific description, christening it *Megachasma pelagios* ("great yawning mouth of the open water"). Even though the fossil record never even hinted at the existence of such an animal, the discovery of the megamouth caused hardly a ripple in the world of marine science.

For years, only male megamouths were found, but then in 1994, a female, the seventh specimen ever recovered, washed ashore in Japan. During 2002, megamouth numbers 16 and 17 were found, the most recent being on April 20th, when a large shark was found stranded on a beach at Natures Valley, Western Cape Province, South Africa. From all the rare specimens found, it is apparent that the megamouth's distribution is worldwide.

ZEROING IN ON ZIPHIIDS

The most elusive large mammals in the oceans, as far as we know today, are some newly discovered, but still secretive, cetaceans. This family of animals is technically termed the ziphiids, or beaked whales, and they are virtually unknown.

In 1976, James Mead, the curator of marine mammals at the Smithsonian's National Museum of Natural History, picked up a piece of a broken skull from a beach in Peru. He recognized it as a species of beaked whale known as *Mesoplodon* but did not manage to acquire an adult specimen, which was needed for the species description, for another dozen years. In 1991, Mead formally described the 12-foot-long Peruvian pygmy beaked whale *Mesoplodon peruvianus*. "That we can still find an animal as large as a whale—even a relatively small one—serves to point out that we don't know a lot about the oceans," says Mead. Since then, many zoologists and cryptozoologists have wondered if the 65 sightings of an unknown

cetacean, *Mesoplodon Species A*, seen in the eastern tropical Pacific, are of the *Mesoplodon peruvianus*.

In 1996, a formal description was made of Bahamonde's beaked whale *(Mesoplodon bahamond)*, which came to the attention of science after the discovery of a skull at Playa Blanca, Robinson Crusoe Island, in the Juan Fernández Archipelago, west of Chile, in June 1986.

Meanwhile, beachings of sea mammals continue to alert cryptozoologists and zoologists to several new species. At the meeting of the Society for Marine Mammals in Vancouver, British Columbia, held in the late fall of 2001, it was announced that a new species of ziphiid had been identified from four incomplete specimens stranded on the east coast of the United States. This new ziphiid was formally named Perrin's beaked whale (*Mesoplodon perrini*) the following year. Scientists at the Vancouver conference also announced that there are as many as 26 additional new ziphiid species documented by molecular analysis that are not yet completely known morphologically. The joke among cryptozoologists is that now "you can't go to the beach in the Western Hemisphere without tripping over a new ziphiid."

FRESHWATER WONDERS

Freshwater bodies also hold surprises. A recently discovered giant stingray called the freshwater whipray *(Himantura chaophraya)* was first sighted in 1890 in the Chao Phraya and Mekong rivers of Thailand. The animal measures 11 to 16 feet long and has a body width of 3 to 7 feet. Specimens of this huge stingray were finally captured between 1987 and 1989.

New river sharks have also been discovered lately. In 1997, the nine-foot-long Borneo river shark *(Glyphis species B.)* was rediscovered in the Kinabatangan River, Sabah state, Borneo, Malaysia.

The previous specimen, whose remains can be found in a Viennese museum, had been collected from an unnamed river in Borneo in the 1890s. In July 2001, another new species, the nine-foot-long spear-tooth shark, was found in the Adelaide River in Australia's Kakadu National Park. Live samples of the *Glyphis*, or "spear," species were collected and X-rayed and have been classified as *Glyphis* type A. Biologist C. Helen Larson of the Northern Territory Museum said that the only other recorded live capture of the *Glyphis* type A shark was in the Bizant River in northern Queensland almost two decades ago. She noted that the museum will work with fish experts in Hobart and South Africa to develop descriptions of the fish so that scientists can study them. "What's here in the Northern Territory is the last remnants of an undescribed fish . . . in other words, it is an endangered fish," Larson told the Australian Society for Fish Biology in their newsletter of May 2000.

"New" reptiles are being rediscovered in freshwater also. During a February-March 2000 expedition conducted by the British-based Fauna and Flora International, a species of crocodile previously believed to be extinct in the wild was found in the remote western jungles of Cambodia. Field team leader Jennifer Daltry said that the researchers sighted three Siamese crocodiles *(Crocodylus siamensis)* living in rivers and marshes within the Cardamom mountain range near Cambodia's border with Thailand. In an article in *The New York Times* in April 2000, Daltry remarked, "We also found large numbers of frogs, moths and sub-species of birds which are almost certainly new. More than a third of the invertebrates we found were new to science. We are going to find many more new species."

Another crocodilian discovery made the news, this time in Africa, in February 2000. Wolfgang Böhme, of the Zoologisches Forschungsinstitut und Museum Alexander Koenig in Bonn, Germany, and his team, were studying reptiles in southern Mauritania,

in the extreme Western Sahara, when they heard rumors of crocodiles on a nearby plateau. They sped to the site, where they found a 60-foot-wide pond—and a Nile crocodile sunning itself. Eventually, they located at this underground pond four Nile crocodiles *(Crocodylus niloticus)*, each only 6 feet long (instead of 18 feet long for their Nile relatives). This is a surviving "prehistoric" population—dating from the time when the Sahara was a fertile savannah, about 10,000 years ago—as shown by the prehistoric cave drawings that exist in the wild chasms and cliffs of Tassili in southeast Algeria.

Discoveries such as these have left in their wake a presumption that other large animals might be found in the world's oceans, rivers, and lakes.

Bloop and Other Sound Evidence

If there are mysteries left in the world, the deep is a good place to find them. In fact, one surprising resource for potential deepwater mysteries is the Acoustic Monitoring Project run by the U.S. National Oceanic and Atmospheric Administration at the Pacific Marine Environmental Laboratory in Newport, Rhode Island. This project holds an ear to the sounds of the world's oceans, which are full of noises. Boats, whales, submarines, and earthquakes, to name a few, all add to the cacophony, of course. But according to an article in the June 2002 *New Scientist*, many of these underwater sounds remain a mystery.

The Acoustic Monitoring Project is a scientific offshoot of a military relic, an array of underwater hydrophones, basically microphones, scattered on the seabed around the globe by the U.S. Navy

in the 1960s to track Soviet submarines. With the end of the Cold War, civilian scientists were allowed access to the system in the early 1990s.

Most of the sounds picked up by these listening stations can be identified by a visual examination of the sound waves, or spectrogram. It's easy to tell the difference between a blue whale, a humpback whale, and a fin whale, according to Christopher Fox, director of the Acoustic Monitoring Project. Weather and ocean currents can also be identified this way, as can earthquakes and all variety of ships. But it's the mystery sounds, which have been given such whimsical names as Whistle, Bloop, and Gregorian Chant, that interest us here.

Candidates for the mystery sounds include volcanoes, icebergs—and huge undiscovered beasts, says Fox. He believes that the sound nicknamed Bloop most likely comes from a marine beast. Its sound signature shows a rapid variation in frequency that is characteristic of the sound signatures of other marine life. But it's unlikely to be a whale. In 1997, Bloop was detected by hydrophones nearly 3,000 miles apart. That span means that Bloop is louder than any known whale sound—or the sound of any other animal for that matter.

One possibility raised is that a giant squid might be responsible. But since there are no recently confirmed sightings of giant squid, no one has a clue to whether they make a noise. Phil Lobel, a marine biologist at Boston University, notes that without the necessary gas-filled sacs, squid would have no way to make such a noise. And that leaves the door wide open for a host of other giant marine creatures—yet unknown—to be the mysterious Bloop-er.

Lakes also harbor mystery sounds. Monster hunter Jan Sundberg recorded some unidentified sounds with hydrophones in Loch Ness, Scotland, in the autumn of 2000, and some more in Lake Storsjön,

Sweden, home of Storsie, in the summer of 2002. The sounds resembled gunshots or explosions. But after an analysis of the sounds by the National Oceanic and Atmospheric Administration, Sundberg concluded that seismic explosions had caused them—from the Great Glen fault line, in the case of Loch Ness. The sounds from both lakes had the distinctive triangular signal of an earthquake.

Geology can't explain all the mystery sounds found in lakes, however. Take, for instance, the mystery sounds found in Idaho's Lake Pend Oreille, home of a Lake Monster known as Paddler. While the reality of that Lake Monster is hotly debated in the area, some researchers speculate that the U.S. Navy—which has an extensive Acoustic Research Detachment at Bayview, conducting experiments in noise control with submarine models—may have encouraged reports of Paddler in order to hide its own activities on the lake. In any case, the navy admitted to science journalist Patrick Huyghe, whose article on Paddler appeared in 1997 in *The Anomalist,* that they have recorded sounds in the lake that they could not identify.

In the late 1990s, George Guedel, an acoustic physicist who is the detachment's civilian director, was asked if navy submersibles, during their dives in the lake, might have seen the Paddler or any evidence of it. "We wouldn't pay much attention unless it was noisy," he replied, before making this surprising statement: "Now, we *have* had noises interfere with experiments before that we couldn't figure out." Any chance they could have come from a Lake Monster? "The noises tended to go on," he said, "but not the way you'd expect from a monster. They would go on for a couple of days and then go away and never come back. These noises have been picked up by our acoustic sensors, and they were noisy enough to interfere with our experiments. It could well have been some of our own hardware, but we just couldn't zero in on it."

The Nessie Story

Scotland's Loch Ness became famous for its Lake Monster in the 1930s. Other than some centuries-old lore about a mystery creature and a few vague nineteenth-century sighting reports, the first specific reference to a monster in the lake was a brief but otherwise unremarkable story that appeared in the lochside Inverness paper, the *Northern Chronicle*, on August 27, 1930.

It wasn't until three years later, when the *Inverness Courier* ran a story in May of 1933, that the mystery creature in Loch Ness began making a splash in the media. Headlined "Strange Spectacle on Loch Ness," the news item described an unnamed couple's strange experience while traveling along the lake's northwest edge on April 14, 1933. The couple, who were later identified as Mr. and Mrs. John Mackay of Drumnadrochit, had stopped their car to watch an "enormous animal rolling and plunging" in the water. The newspaper described what the witnesses had seen as a "monster"—this was the first use of the word to describe the mystery animal in Loch Ness.

Shortly before, and not at all coincidentally, an older road running along the north end of Ness had been expanded. Using dynamite, construction workers had removed trees and other obstructions to a view of the water. The explosive disturbances and ability to clearly see the loch's surface while driving on the new road appeared to be directly related to a sudden proliferation of the "monster" sightings.

The legend was born when the *Inverness Courier* ran a follow-up article on the Mackay sighting on May 12, 1933, with the headline "Loch Ness 'Monster.'" One month and 20 eyewitness sightings later, the story had become an international sensation. And a year later, the creature would be dubbed "Nessie."

Monster or no monster, Loch Ness is a remarkable glaciated tectonic lake lying within a line of lochs, the Great Glen fault line, that diagonally bisects northern Scotland. The largest freshwater body in Scotland, it is more than 20 miles long and, some say, as much as 1,000 feet deep. Because of its depth, it never freezes over during the cold and dark Scottish winters. The loch is also narrow, no more than a mile and a half at its widest. Only miles from the North Atlantic Ocean, it was formed 10,000 years ago during the last Ice Age, at the end of which glaciers melted and seawater flowed in to fill up the fjords they had created. Over time, the water turned fresh, and the descendants of the animals that had washed in from the North Atlantic adapted to the new environment or died off.

Whether these animals included large beasts thought long extinct or never catalogued by science, no one knows, but word of monsters in Scottish lochs has a long history. The oldest documented link to the area dates back some 1,500 years. St. Adamnan's biography, *Vita Sancti Columbae (Life of St. Columba)*, published in A.D. 700, describes an early medieval legend that supposedly took place in A.D. 565 (researcher Ulrich Magin says that the correct date is A.D. 580). The account has St. Columba confronting a large, aggressive animal, which some books refer to fancifully as a "dragon," in the nearby River Ness and causing it to flee "backwards more rapidly than he came." Other accounts come down to us through the folklore of Water-kelpies, the ancient Scottish name for Lake Monsters with horse-like heads. In fact, a book published in 1823, *The Popular Superstitions*, by W. Grant-Steward, specifically noted Loch Ness as the location of a Water-kelpie story. And the *Inverness Courier* of October 16, 1833, in a discussion about a warlock, mentioned a Kelpie in Loch Ness.

As the "Monster" entered popular culture in the 1930s, a number of people came forward to recount alleged sightings dating back to the middle of the nineteenth century. Most—though not all—of the

sightings concerned a large animal whose black or gray back resembled an overturned boat in the water. Sometimes the back was visible only as two or three humps. The animal was said to have a long, thin neck and a small head of horse-like appearance. On occasion, its long, tapered body would be visible, with fin-like attachments and a thick, extended tail.

Though often called "the Monster"—and thought by one early chronicler, Rupert T. Gould, to be a single stranded Sea Serpent—a handful of sightings confirmed what common sense would have dictated: that to survive, a breeding population of Nessies would be necessary. In other words, there had to be more than one "Loch Ness Monster." Sometimes, multiple creatures of varying sizes were seen at once. A report in the *Scottish Daily Press* of July 14, 1937, identified "three Monsters about 300 yards out in the loch . . . two black shiny humps, 5 ft. long and protruding 2 ft. out of the water and on either side . . . a smaller Monster." Sixty years later, in September of 1997, Michael Thompson Noel, a journalist for London's *Financial Times*, would have a similar experience. He wrote—apparently seriously—of seeing "five Nessies bobbing companionably," each with "three or four humps and a greenish-brownish hide," and including a small, juvenile specimen, at a distance of no more than 15 feet. Estimates of the animals' size range from 3 to 65 feet, further evidence, perhaps, of a breeding population. Mostly, however, the creatures are said to range from 15 to 30 feet.

Aside from eyewitness reports, evidence for the existence of Nessies also comes from photographs and sonar tracks. The former has proved problematic in some important regards. The most celebrated of pictures, taken in April 1934 by physician R. K. Wilson—the so-called Surgeon's Photograph—shows what is supposed to be the long-necked profile of a plesiosaur-like Nessie. But a second, much-less-publicized photo taken at the same time suggests that it was an otter or a seal—notwithstanding an unsubstantiated 1994 al-

legation that the photo was a hoaxed image of a doctored plastic toy submarine. There have been several notorious hoaxed photographs of Nessie through the years.

The single best piece of photographic evidence of Nessie is a film taken on April 23, 1960, from the eastern shore. Tim Dinsdale, perhaps the most respected of all Nessie investigators, was on a watch when he noticed, as he recalled in his 1961 book, *Loch Ness Monster*, through his binoculars a "long oval shape, a distinct mahogany color . . . well above the water." Suddenly, as it began to move, Dinsdale realized that he was looking at the back of "some huge living creature." He managed to get four minutes of it on film before the object submerged.

In a subsequent analysis by Britain's Joint Air Reconnaissance Intelligence Center (JARIC), this film was viewed along with a second one, taken by Dinsdale for purposes of comparison, of a boat moving in the same direction as the presumed Nessie in the first film. With this, JARIC was able to disprove the skeptics' theory that the first film had been of a boat, and concluded that the thing was "probably . . . an animate object," 12 to 16 feet in length, 3 feet above the water, moving at 10 mph. JARIC's analysis has yet to be successfully challenged. If it is possible to prove that these creatures exist without producing the actual physical remains of one, the Dinsdale film is that proof.

Since the Dinsdale footage, many other films, videotapes, and photographs have been presented as evidence of Nessie, including a well-publicized photograph of a very-long-necked Nessie in 2002, which turned out to be a hoax, and some Internet webcam photographs, which were originally thought to be of Lake Monsters but which turned out to be of flying gulls, apparent honest mistakes.

The high level of interest in Nessie has continued. In March 2002, Bobbie Pollock, a postman from Glasgow, released to the media a three-and-a-half-minute video of an unidentified black crea-

ture rising five feet out of Loch Ness. Pollock shot the footage in August 2000, but had not mentioned it before, fearing ridicule. He got it now. Some critics sneered that the neck looked like a car's bumper, but Pollock stood by his video.

Identity Crisis

The story of Nessie at Loch Ness is no longer the only story of Nessie. Today, when people talk about monsters in rivers, lakes, lochs, loughs, seas, and oceans, whether off Maryland or Malaysia, the word used in the popular media and in the public mind is "Nessie." The word has taken on meaning far beyond the shores of Loch Ness.

In the nineteenth and early twentieth centuries, before "Nessie" came along as a handy tag for strange reports of watery creatures in every corner of the world, the common label for such creatures was "Sea Serpent." Any creature seen in the oceans or bays was called a "Sea Serpent," even if it did not necessarily have a serpentine form. So pervasive was the use of this term that when strange creatures seen in lakes began to get more and more media attention, even the land-locked, non-marine creatures were called "Sea Serpents."

In 1855, in the resort town of Perry, New York, sightings of the "Silver Lake Sea Serpent" made the city an instant tourist Mecca. Thousands visited. The excitement did not die away even when a 60-foot artificial Sea Serpent was found in the ashes of a burned-down hotel in 1857. Today, the hoax has become the heart of an annual Sea Serpent Festival in Perry.

In 1873, P. T. Barnum offered a $50,000 reward for any monster hunter who could bring him the "hide of the great Champlain ser-

pent to add to my mammoth World's Fair Show." But no one collected any money for capturing the "Lake Champlain Sea Serpent," as it was called back then.

When the first reports of the Loch Ness Monster began to attract press and magazine attention in 1933, the notion of a land-locked Sea Serpent again became prevalent. For example, the *Illustrated London News* ran an article called "Loch Ness in Possession of a 'Sea Serpent'" in 1933, and in the letters column of *The Field* in 1934, discussions revolved around "An Up-Country 'Sea Serpent.'"

In 1942, the use of the term "Sea Serpent" could still be found in titles like this one: *Sea Serpents: Wisconsin Occurrences of These Weird Water Monsters,* published by the Wisconsin Folklore Society. Meanwhile, back at Lake Champlain, as late as 1945, the Sea Serpent name persisted, when a man claimed to have caught a 14-inch "baby Sea Serpent" at the lake—probably a salamander.

About a year after the Loch Ness Monster was named, the term "Nessie" began to appear. BBC News correspondent and author Nick Witchell has written that "Nessie" was bestowed on the creature by the press in 1933, but he did not give further details. But is this so? A letter to *The Times* of London, on December 22, 1933, says it's time to stop calling the creature a "Monster" and give it a name, with the humorous suggestion being "MacNess." Longtime Loch Ness researcher Henry Bauer tells us that the earliest clipping in his possession with "Nessie" in the title is the August 9, 1934, *Bulletin and Scots Pictorial*, "Nessie 'snapped' five times by watchers," referring to the photos taken by Sir Edward Mountain's watchers. By mid-decade, the endearing nickname was in common use, as shown by the *Time* magazine article of May 3, 1937, entitled "Again, Nessie."

"Nessie" was such a universally loved name that once it became

popular, the name began to outgrow its origins. First, anything seen in Loch Ness was called "Nessie," no matter what it looked like. Second, other Lake Monsters around the world were called "Nessie" or "Nessie's cousin." This trend appears to have increased, starting in the 1970s, with stories ranging from Canada to China. In 1976, an article about a Tanzanian Lake Monster appeared, calling the creature "Nessie Junior." The *Scuba Adventurer Diving News* carried an article in its issue of July 31, 2002, entitled "Chinese Nessie 'alive and well.'" And wire services on November 18, 2002, headlined their dispatches "'Nessie' found in Australia" when a 120-million-year-old fossil of a prehistoric long-necked reptile, a plesiosaur, was dug up in the Australian Outback.

Nessie has also given birth to a multiplicity of spinoffs. These include Tessie in Lake Tahoe, Nevada; Mussie in Muskrat Lake, Ontario; Chessie in Chesapeake Bay, off Virginia; and Cassie in Casco Bay, off Maine. In Japan, you will find Issie and Kussie (or Kushi) reportedly living in the crater lakes of two volcanoes. Lake Erie has its South Bay Bessie; Wales's Lake Bala has Teggie; Norway's Lake Mjøsa has Mjossie; and Scotland's Loch Lochy has Lizzie.

No other Lake Monster name has spawned so many soundalikes. The next-most-common rival has fewer imitators. British Columbia's Lake Okanagan monster is called Ogopogo, and has been around since the late 1800s. Across Canada, the copycat names for Lake Monsters include Manipogo, in Manitoba, and Igopogo, in Ontario's Lake Simcoe. The only American Lake Monsters whose name may have been influenced by the name Ogopogo are the creatures seen in Flathead Lake and Waterton Lake, Montana—the Oogle Boogles. But the "Ogopogo" clones have been a minor ripple in the tidal wave of names left in the wake of "Nessie."

The proliferation of "Nessie" was a significant cultural event. To deny this would be to ignore how intrinsic "Nessie" has become in our cultural lives. "Nessie" has been commercially associated

with everything from playful folklore and tourism to high security and water products. At the end of 2002, the racing organization British Waterways-Scotland presented a winter race series entitled the "Nessie Hibernation Series." In the Internet age, "Nessie" is a security system, short for New European Schemes for Signatures, Integrity, and Encryption. In Denmark, the international company Danfoss has developed a unique Nessie® water hydraulics product program, which covers more than 40 patents, and is used throughout the world.

But no matter where the reports come from, because of the worldwide image of Nessie as a long-necked plesiosaur (essentially modeled on the 1934 Surgeon's Photograph), school-aged children anywhere in the world can talk with authority about and draw a picture of what they think Nessie looks like. In 1998, John Kirk comments in his book, *In the Domain of the Lake Monsters*, that both the *Encyclopaedia Britannica* and the Smithsonian Institution state that they have received more requests for information on Nessie than on any other topic.

Unfortunately, this widespread use of the term "Nessie" has been anything but beneficial in terms of understanding these creatures biologically. Because of the characteristics associated with Nessie in the popular imagination, any time an unknown creature in any body of water is called "Nessie," it is seen as female, as one animal, and as something more or less humorous. But the fact is that *many* Nessies (to employ that overused generic name), both male and female, must exist in Loch Ness as elsewhere to sustain a viable breeding population. And many of them, in fact, are beasts of an entirely different sort, as this guide will show. But first, we must throw a little cold water on the subject.

Monstrous Caveats

No one actually argues that Sea Serpent and Lake Monster witnesses are not seeing anything. The argument is over just *what* they are seeing. And there is no doubt that what *most* people are seeing are *not* Sea Serpents and Lake Monsters but (take a breath, this list is a long one) such things as boats, waves, fish feeding close to the surface, tricks of light on the water, fish swimming in densely packed formations, waterspouts and water devils, currents uprooting debris from the bottom, Indian dugouts bubbling to the surface, masses of floating seaweed, birds skimming the water, prototype navy submarines, and dead trees. From a distance, just about anything might look like a Lake Monster or Sea Serpent. And then there is psychological contagion—if people are told to look for monsters, they will see them.

Some explanations for Sea Serpents and Lake Monsters are, however, almost as fanciful as the mystery creatures themselves. Take the seiche, for instance. A seiche is simply a standing wave—a single wave that moves back and forth—in an enclosed water basin like a lake or a bay. It's caused by temperature differences in water layers, and is most likely to occur in narrow bodies where strong prevailing winds run the length rather than the width of the lake, just as in Lake Champlain and Loch Ness. For this reason, physicist Robert Prigo, geologist Thomas Manley, and graduate student Benjamin Connell—all at Middlebury College in Vermont—believe that a seiche can explain Lake Champlain's Champ and Loch Ness's Nessie, according to an article published in *Discover* magazine in April of 1998. They believe that these standing waves, which Manley says can be 60 miles in length and from 30 to 300 feet in height,

can cause logs and vegetative masses to churn to the surface. These supposedly are what people are reporting as "Monsters."

A slightly better explanation involves gigantic colonies of pelagic tunicates, or salps. Tunicates are tiny primitive marine organisms usually classified as invertebrates. Some species aggregate in immense numbers, creating long, hollow, snake-like tubes called salps. These superorganisms are thought to reach lengths of 45 feet and diameters as great as 3 feet. The tunicates comprising the salp are embedded in a gelatinous wall and face inward. Each tunicate has a siphon that pumps seawater for its nutrients. The tunicates, working in unison, manage to create a strong current of seawater through the tube—propelling the salp through the water. And *voila*, there is your Sea Monster.

Some reliable sightings of Sea Serpents and Lake Monsters have turned out to be known creatures. In 1994, a Japanese television production company decided to investigate the claims of a Lake Monster in Lake Dakataua, New Britain, New Guinea. They brought the best video equipment, lined up the best labs to analyze whatever evidence they might turn up, and hired Roy P. Mackal, a retired University of Chicago biochemist whose expeditions in search of mystery animals are known worldwide.

During their first expedition, the producers set up cameras around the lake and—with considerable luck—managed to capture the creature on video. The image showed an animal with a large, crocodile-like head, a small hump in the middle, and a larger hump in the rear. It measured an astonishing 50 feet long from end to end, and traveled at about 4 mph through a lake that is absolutely devoid of fish.

Since the animal would have to feed elsewhere, Mackal was convinced that the animal entered over a narrow split of land at one end of the lake. But to do what? The producers discovered the answer

during their second expedition to the lake a few months later. Again, their cameras captured the monster on video—but this time at close range. It looked like an incredibly large, 50-foot crocodile of the sort that existed back in the Cretaceous Period, more than 65 million years ago. But Mackal's careful examination of the video revealed that the "monster" was really not one but three animals—three regular *Crocodylus porosus*, doing what they must. "They go into the fishless lake to mate," noted Mackal. "The head you see is the female's. The middle hump seems to be the back of the tracking male. And the rear hump is probably the back of a second male." While it wasn't a Cretaceous Croc, it was the first time that *Crocodylus porosus* had ever been seen in the mating phase.

Other familiar creatures, like a mass of mating manatees, or several porpoises or whales swimming in line, could also be mistaken for the coils or humps of a Sea Serpent.

There exists a host of less familiar yet very real animals that people might mistake for Sea Serpents and Lake Monsters. One is the ocean-dwelling oarfish. Reaching lengths of 36 feet (perhaps even 50 feet), this pale silver fish with blue streaks is the longest bony fish in existence. The oarfish is found in subtropical waters and has two long, narrow pelvic fins. But aside from its size, the oarfish cannot extend its head above the water, and along its spine is a bright-red crest—two factors that reduce the likelihood of misinterpretation as a Sea Serpent. Furthermore, the oarfish spends most of its time swimming in a vertical position, not a horizontal one, as would be expected from a Sea Serpent lookalike.

Other lengthy creatures include the European conger eel, which can measure nearly ten feet long and lives in the eastern Atlantic, the Mediterranean Sea, and the Black Sea. The ocean sunfish has a cylindrical body up to 11 feet long with long perpendicular dorsal and anal fins. The largest marine ribbon worm can reach a length of

100 feet, but at that length it would be less than half an inch thick—not a likely Sea Monster.

The warm water whale shark, at 40 feet (perhaps up to 66 feet), is the largest fish in the world. It might well be mistaken for a Sea Monster, as could other kinds of whales, to an untrained observer, though none of these whales have the long neck often reported of Sea Serpents.

Giant squid, when found floating or washed up dead on the shore, might be mistaken for Sea Monsters, as could killer whale carcasses or basking sharks when found stranded and decomposed (see pages 276–286).

The southern elephant seal, which can reach 22 feet in length, may explain some marine sightings, as could the hooded seal, though it doesn't grow to more than ten feet long. However, researcher Roy Mackal's theory that the White River Monster, a strange freshwater "Monster" reported in Arkansas between 1937 and 1972, is an ocean-going elephant seal living far inland is no longer viewed as a credible theory.

The longest sea snakes are the yellow snakes, but unless found in groups in calm water, their eight-foot lengths are unlikely to confuse anyone. Although, it should be noted that British wildlife collector Willoughby Lowe claimed to have seen a mass of twisted sea snakes ten feet wide and dozens of miles long in the Strait of Malacca during the first half of the twentieth century.

The sturgeon can also make a good Lake Monster. One enlightening story comes courtesy of Lake Washington in Washington State. For years, drivers crossing the floating bridges of Lake Washington reported seeing a long, dark object in the lake. Some observers claimed that the giant monster snacked on ducks. Then, on November 5, 1987, the monster washed ashore. It was a giant sturgeon, measuring 11 feet long and weighing about 900 pounds. The

monstrous fish was thought to be more than 80 years old. Experts say that sturgeons can live a hundred years, grow to be 20 feet long, and weigh nearly a ton—but they don't eat ducks. Since its discovery, no new reports of a monster in Lake Washington have been filed. Adrian Shine, a Loch Ness Monster debunker, feels that sturgeons are behind the reports of Nessies.

For some sightings of bumpy-headed creatures seen in northern freshwater locations in August, Norwegian zoologist Lars Thomas talks of swimming moose in Scandinavian lakes, and tour-boat guide Dick Raynor of swimming deer in Loch Ness, being mistaken by some sincere witnesses as Lake Monsters.

And last, but certainly not least, hoaxes do exist. Nineteenth-century American newspapers delighted in concocting bogus tales of Sea Serpents. But hoaxing did not stop then. On December 12, 1964, a French photographer named Robert Le Serrec claimed to have seen and photographed a 70-foot-long Sea Serpent off Hook Island, Queensland, Australia. Almost immediately, zoologists Ivan T. Sanderson and Bernard Heuvelmans expressed doubts about the story. It turned out that Le Serrec was wanted by Interpol; he had obtained funds from people, telling them he had an idea for making a great deal of money—"something to do with the Sea Serpent," noted Heuvelmans in his overview of the case in his book *In the Wake of the Sea-Serpents* (published in French in 1965 and in English in 1968). The color photograph Le Serrec took apparently shows a large mass of plastic or cloth tied together to look like a humongous tadpole-shaped monster.

Despite all these caveats about hoaxes, floating logs, and the occurrence of known animals in unexpected places, however, there is very little doubt that some aquatic animals, currently unrecognized by science, do exist.

Sea Serpents Classified

The esteemed Dutch biologist Antoon Cornelis Oudemans was the first to conduct a truly systematic study of the Sea Serpent. Between 1889 and 1892, Oudemans, who was the director of the Royal Zoological and Botanical Gardens at The Hague, searched through more than 300 titles to collect all the reports of Sea Serpents that had been published until that time. After arranging them chronologically, he went about eliminating the hoaxes and weeding out the obvious misidentification of known animals. This left Oudemans with 162 reports on which he would base his conclusions, though he would add another 25 to the appendix of his book, *The Great Sea Serpent,* just before its publication in 1892.

Oudemans's examination of these reports led him to consider that, despite the sometimes-contradictory details provided by eyewitnesses, the reports all described a *single* animal that varied in length from 50 to 100 feet and had a serpentine tail, four flippers, large eyes, a mane, and whiskers. To Oudemans, the evidence demonstrated that this Sea Serpent was a mammal, not only because it had four webbed feet or flippers like a seal, but also because it was sometimes described as spouting vapor, just like warm-blooded mammals. Since this vapor came not from a blowhole as with a cetacean but from its nostrils, Oudemans concluded that the Sea Serpent must be a type of giant long-necked seal.

Oudemans's report was conscientious and courageous—and also clearly wrong on at least one aspect. "The great fault of Oudemans's book," noted the Dutch zoologist Bernard Heuvelmans in 1965, "is that it is based on the preconceived notion that there is only one kind of unknown serpentine animal in the ocean. Now this is rather as if one were to say that there could be only one kind of

large cigar-shaped animal in the ocean. In fact there are lots of them . . ." Obviously, Oudemans had excluded some valid reports that did not fit into his long-necked-seal theory.

While Bernard Heuvelmans may not have been the first to realize that there was more than one type of Sea Serpent in the world's oceans, he was certainly the first to produce a detailed classification of some of the many large marine animals that science has not seen fit to recognize. Of the 587 reports of Sea Serpents dating from 1639 to 1966 that Heuvelmans studied, he believed that 358 represented genuine unknowns. His examination culminated in the massive and enormously influential work entitled *In the Wake of the Sea-Serpents.*

Heuvelmans concluded that buried in these 358 reports of "Sea Serpents" were at least nine different types of unknown animals, which he proceeded to classify. The most prevalent of these he called the **Long-necked,** for the long slender and flexible neck so often described by eyewitnesses of Sea Monsters. Heuvelmans believed that this small-eyed creature lived in oceans all around the world and that it was a type of elongated seal. He also thought a seal-like animal was responsible for his second category of deep-dwelling marine creatures, the **Merhorse,** which he named for its horse-like head, mane, and large eyes.

Heuvelmans's third type of Sea Monster was called the **Many-humped,** after the string of fixed humps along the ridge of the animal's back. He believed that this North Atlantic–dwelling creature was some type of ancient whale, as was the animal in his fourth category, which lived in tropical seas, the **Many-finned,** so named for the lateral, fin-like projections on either side of its body. Heuvelmans called his fifth category the **Super-otter,** for the animal's distinct otter-like head, tapered tail, and rough skin. This, too, he regarded as a type of ancient whale particular to Scandinavian waters, and he believed that it became extinct in the mid-1800s.

Heuvelmans's sixth type was the **Super-eel.** He regarded these as

serpentine fishes with tapering tails. One type had a mottled appearance, while the other type was dark in color above and light below.

Heuvelmans's last three categories involved animals that were seen much less frequently than the rest. The seventh type he called a **Marine Saurian,** a large ocean-going crocodile; the eighth he dubbed the **Father-of-all-the-turtles,** a giant oceanic turtle; and the ninth he named the **Yellow-belly.** He was unsure whether this tadpole-shaped animal was a fish or an amphibian.

Naturally, Heuvelmans's bold and far-reaching conclusions were bound to be controversial. He has had many critics, the most caustic among them being the French folklorist Michel Meurger and the German researcher Ulrich Magin, who stated in the 1996 issue of *Fortean Studies*, "We will never find any of Heuvelmans's nine creatures. They simply do not exist. The Sea Serpent is a cultural beast, like the mermaid, the dragon and the unicorn."

Magin faults Heuvelmans for concentrating on only one characteristic for classification purposes. "One thus has the impression that, if a witness mentions a mane, the creature is a merhorse; when he describes a lengthy neck, it is a long-neck; when the witness happens to stand on Scandinavian shores, a super-otter . . ." And so on. Whenever a case has many observers and a multitude of documented details, sometimes describing a creature with a long neck, *and* a mane, *and* many humps, for example, Heuvelmans "cannot handle" the report, says Magin, and "ends up with a trail of question marks."

Other than such general criticisms, much doubt has been cast on two of Heuvelmans's Sea Serpent categories. One is the Super-eel. Heuvelmans considered this a valid category based largely on the discovery in 1930 of an abyssal eel larva six feet long. Since the common eel grows into an adult 30 times the size of its larva, Heuvelmans concluded that if the larva found by Danish marine biologist Anton Bruun on the oceanographic vessel *Dana* grew at a similar rate, the adult would end up being anywhere from 100 to

nearly 200 feet long. But in 1970, David G. Smith, an ichthyologist, identified the larva found by Bruun as that of a spiny eel. This eel does not grow to be much longer than its larval stage.

The case on which Heuvelmans built his Super-otter category has also not stood up well over time. He named the creature *Hyperhydra egedei*, based on the sighting by a Danish priest and missionary named Hans Egede off the coast of Greenland in July of 1734. But a recent re-examination of the original Danish descriptions of the Egede sighting, by researcher Lars Thomas in the 1996 edition of *Fortean Studies*, reveals that the account on which Heuvelmans based his description was in error on several important details, including that Hans Egede was not himself an eyewitness. The drawing and description of the monster from the original account reveals a creature that is actually about 100 feet long "with a long pointed snout, two very large and distinct flippers, a powerful but elongated body, a tail ending in a point, a small dorsal fin, and a rough and scaly skin," according to Thomas. The description sounds far more like an ancient whale than anything resembling Heuvelmans's Super-otter.

No one since Heuvelmans has ever attempted such a wide-ranging and comprehensive classification of unknown animals in the ocean, though a few have tried to modify his original scheme to take into account more recent sightings and the problems inherent in Heuvelmans's original classification system.

Connecticut Sea Monster researcher Gary Mangiacopra, for instance, concluded that there were four basic Sea Monster types, after studying 64 reports from the North Atlantic in the nineteenth century. Mangiacopra's first type, the **Dorsal Finner,** is a two-tone, 100-foot animal about a dozen feet in diameter that uses vertical undulations to swim. Just as this type somewhat resembles Heuvelmans's Many-humped Sea Monster, Mangiacopra's second type, the **Maner,** is really just another name for Heuvelmans's Merhorse.

Mangiacopra's **Hornhead** describes a shorter two-tone animal only 25 to 60 feet in length, with scales, and with a round head two feet across with characteristic horns. The fourth type, the **Multicoiled** Sea Monster, Mangiacopra equates with Heuvelmans's Super-otter, though it appears to have more in common with Heuvelmans's Many-humped Sea Monster, with its serpentine-like coils looping in and out of the water.

Following an examination of more recent twentieth-century sightings, however, Mangiacopra realized that his four categories offered poor fits for what was being seen, and he apparently dropped his scheme. Just about all modern reports resemble his Multicoiled type, with a variety of body proportions.

The next attempt at a classification system, again based on a localized collection of reports, came in 1973, when two Canadian oceanographers, Paul H. LeBlond and John Sibert, published a monograph at the University of British Columbia's Institute of Oceanography. They studied 30 sightings and alleged strandings of "Caddy" that took place off the coast of British Columbia between 1892 and 1969. They identified three different kinds of animals, without ascribing particular names to them. The three types are a curious mix of Heuvelmans's types. One had small eyes and horns similar to Heuvelmans's Long-necked but *with* a mane. The second had large eyes like Heuvelmans's Merhorse but *without* a mane. These two types were the most common. Rarer was the coiled serpentine third type with sheep-like head and a jagged fin along its back.

In a subsequent work, *Cadborosaurus,* published in 1995, oceanographer LeBlond, now teamed up with Edward L. Bousfield, chief zoologist of the Canadian Museum of Nature in Ottawa, backed off the earlier proposal for three Caddy types. They were now not even comfortable with two. While "it is not impossible that more than one animal might be hiding under the label 'Caddy' . . ." they wrote, "the current data are not sufficiently detailed to justify creat-

ing two different cryptid species." They now thought that most Caddy reports could be explained as varied descriptions of just one species, which they felt was an unknown reptile with mammalian traits.

To propose that Sea Serpents exist at all, as one kind of animal, is brave enough for most.

Lake Monster Recognition and Classification

The scholarly and scientific recognition of Lake Monsters has, in many ways, paralleled that of Sea Serpents. The story begins again in Scandinavia. *A Narrative of the North-East Frosty Seas,* written in 1522 by the Duke of Mosconia, notes that in the "lake called Mos, and the Island of Hoffusen in myddest thereof . . . in this lake appeareth a strange monster." And since 1635, the Lake Monster from Storsjön, a deep mountain lake in central Sweden, has been seen at least 150 times by 450 people, and has been a topic of scholarly and scientific interest ever since.

Early missionaries, some of whom became scholars of Scandinavian zoology, drew no sharp dividing line between what was seen in the oceans and some of the things observed in lakes inland. Because the creatures described had so many features in common, it appeared logical to these scholars that these animals of lake and sea might be related.

Even the Lindorm, a dragon-like creature reported in nineteenth-century Sweden, was regarded as a landlocked Sea Serpent. People encountered this mystery creature in the countryside, especially in

or near marshes and bodies of water. As late as 1885, the scientist and folklorist Gunnar Olof Hylten-Cavallius collected 48 first-person accounts in a book on the subject. Half of these reports involved multiple witnesses, and one came from a member of the Swedish parliament. Hylten-Cavallius's witnesses described the Lindorm as 10 to 20 feet in length. It was said to have a body "as thick as a man's thigh; his color is black with a yellow-flamed belly. . . . He has a flat, round or square head, a divided tongue, and a mouth full of white, shining teeth." The "heavy and unwieldy" creature had a stubby tail and wild, hypnotic eyes. Hylten-Cavallius offered a reward for a dead Lindorm, but found no takers. He would be the last scientist to investigate the reports as Lindorms. Today, Lindorms are considered part of the evidence for the existence of Lake Monsters in Scandinavia.

The scientific investigation of Lake Monsters began in earnest in the early nineteenth century and had much to do with the controversy over Sea Serpents. It was assumed that Lake Monsters were Sea Serpents that had entered freshwater bodies from the ocean, either temporarily or permanently. Lakes where these creatures had been observed became the focus of investigations as scholars reasoned that a Sea Serpent could be more easily captured in a lake or river than in a vast ocean.

This is exactly the attitude that prevailed at Loch Ness in 1933, when the reports of an enormous animal in the loch captured the public's attention. As had happened in Scandinavia, missionaries in an abbey on the shore of Loch Ness were among the first scholars to recognize the loch's pre-1930s reports as a subject for serious scientific study. Father Aloysius Carruth brought these together in his booklet *Loch Ness and Its Monster,* published by the Fort Augustus Abbey in 1938.

One early chronicler, the retired military commander Rupert T. Gould, in his 1934 book *The Loch Ness Monster and Others,* consid-

ered the monster a single stranded Sea Serpent. But, as noted previously, a handful of sightings later confirmed what common sense would have dictated: that for such an animal to survive in Loch Ness there would have to be a breeding population of Nessies.

Within a few decades, a host of scientific investigations followed Lt. Col. Rupert T. Gould's overview of the Loch Ness events of the 1930s. In the 1960s and early 1970s, University of Chicago biologist Roy P. Mackal led several summer-long expeditions to the loch, during which he managed to obtain sonar contact with large objects moving about in the waters of Loch Ness, and he also recorded unidentified animate sounds deep in the loch. (As noted earlier, in the 1960s, the British Joint Air Reconnaissance Intelligence Center analyzed Tim Dinsdale's Nessie film, concluding that the mystery thing in the water was "probably . . . an animate object.")

Researchers sponsored by the Academy of Applied Sciences (a private, Massachusetts-based nonprofit organization that promotes "creativity, invention and scientific achievement") and *The New York Times* returned to Loch Ness in 1972 and in 1975. During this period, Academy founder Robert Rines and his team managed to capture some dramatic photographic images, which were analyzed and discussed in such professional journals as *Technology Review* (see pages 111–114). Zoologists from a range of prestigious scientific and academic bodies, including the Smithsonian Institution and Harvard University, tentatively endorsed the reality of Loch Ness Monsters on the strength of the evidence from these expeditions. But most scientists have held out, awaiting clear-cut proof that would be provided by a body or DNA sample. Rines and his Academy of Applied Sciences have continued to pursue Nessie into the twenty-first century with new high-tech expeditions at Loch Ness.

There has been no serious attempt to classify the Lake Monsters reported around the world because, in part, they are believed to be

of a singular nature. While some lakes appear to harbor unique creatures, most Lake Monster sightings seem to involve the traditional Long-necked, as the Belgian zoologist Bernard Heuvelmans duly noted in his grand work on Sea Serpents published in the 1960s.

Most of the scientific interest in Lake Monsters has revolved around piecemeal attempts to identify the animals. In 1856, for example, the *Inverness Courier* correspondent suggested that the unknown creature in Loch Ness was an oversized conger eel. Later Loch Ness theorists took their cue from the Dutch zoologist Antoon Cornelis Oudemans—author of the influential 1892 tome *The Great Sea Serpent*—who believed that huge long-necked seals were responsible for "Serpent" sightings. In the 1930s, when Oudemans became interested in the Loch Ness Monster, he identified the monster as a lake form of his long-necked and long-tailed seal, which he had named *Megophias megophias*. That was also the conclusion that Swedish zoologist Peter Olsson came to after studying the Lake Monster reports from Lake Storsjön in central Sweden.

The theorizing over the identity of these Lake Monsters has had a rollercoaster-like quality. In 1934, Lt. Col. Rupert T. Gould speculated that the Loch Ness Monster might be a Giant Newt. Experienced zoologist Maurice Burton first proposed the Giant Eel theory in 1957, when he was Deputy Keeper at the British Museum of Natural History. But in 1961, he changed his mind, concluding that the sightings were of nothing more than rotting vegetable matter, common water birds, or otters.

Fueled by new fossil finds and a boom in the popularity of dinosaurs during the 1960s, the plesiosaur theory came into vogue at Loch Ness and elsewhere. In 1960, for example, Denys W. Tucker, the principal scientific officer at the British Museum of Natural History and an international expert on eels, ventured that the creatures in Loch Ness might be plesiosaurs. These Jurassic-era reptiles are

usually equated with images of the long-necked marine animal Elasmosaurus, the largest of which was said to be 50 feet long.

Though the long-necked-seal theory had its heyday at the end of the nineteenth century, certain aspects of the theory persevered, such as the idea that mammals, rather than reptiles, were responsible for the Lake Monster sightings. In the 1970s, University of Chicago biologist Roy P. Mackal proposed that these creatures were most likely zeuglodons, ancient snake-like whales, which disappeared from the fossil record some 20 million years ago. Mackal believed that these creatures might live on in certain lakes in the world's northern regions. He concluded that the continuing existence of the zeuglodon, or at least a freshwater evolutionary variant of one, could well explain both the Ogopogo of British Columbia's Lake Okanagan and the Champ animals seen in Lake Champlain of New York/Vermont/Quebec. Today, the zeuglodon has largely eclipsed the plesiosaur as the favorite explanation for Lake Monster sightings around the world.

But from the mid-1970s to the present, cryptozoologists Peter Costello, Loren Coleman, and others have adapted the mostly sea-based, long-neck-seal theories of Oudemans and Heuvelmans to explain certain Lake Monster reports as well. Could Nessie, Ogopogo, and other Lake Monsters be an unknown form of long-necked pinniped, the zoological term for seals?

A New Classification System

It would be easier to sell the existence of Sea Serpents and Lake Monsters to the public and to science if just one or two types of unrecognized creatures were involved. But seas, lakes, and rivers are

diverse environments, and reality demands otherwise. Nature has never been known for its uniformity.

In producing this field guide, we have reviewed all past efforts at classifying the world's marine and freshwater unknowns. The efforts of Antoon Oudemans, Rupert Gould, Ivan Sanderson, and Bernard Heuvelmans have been particularly influential. But while drawing upon the work of others, we believe that our new fourteen-part classification system manages to introduce new concepts that we feel best encompass all the evidence available to date. Perhaps even more significant, ours is the first attempt at classifying not only Sea Serpents but Lake Monsters as well, a task that even our predecessors have largely shied away from.

Our first type, which we call the **Classic Sea Serpent,** groups together three of Heuvelmans's unknowns—Super-otters, Super-eels, and some of the creatures in his Many-humped category—into one. We believe Heuvelmans's attempt to distinguish between various behaviors, individual characteristics, and regional and temporal variations, in addition to the inclusion of erroneous material, led him to propose three unknown, undiscovered animals in place of one general type.

Rather than singling out the Many-humped, for example, as a creature of the North Atlantic, we see a continuous link between the centuries-old Sea Serpent reports from the eastern North Atlantic and the more contemporary western North Atlantic sightings, as well as some recent Pacific sightings. Furthermore, we feel that his Many-humped category actually reflects a *behavior* displayed by several types of unknown marine animals, rather than a *physical characteristic* specific to one type. As researcher Arlene Gaal has suggested in her 2001 book, *In Search of Ogopogo:* "Observations of the animal swimming in the distance or on direct eye level give the im-

pression of it being multihumped, but this is merely an animal undulating as it swims with head, neck, and shoulders out of the water in simultaneous motion."

Additionally, we believe that Heuvelmans's separate category for the Super-eel does not hold up, because it is based upon misinformation about a larva that we know today does not represent a giant form. Also, the behaviors and appearances of his Super-eel clearly overlap—in distribution and description—with many similar traits (even down to the dark upper and white underside) of the Super-otter and the Many-humped. And last but not least, most cryptozoologists feel that there are simply no sightings to support Heuvelmans's Super-otter category today.

We maintain, therefore, that in classifying the general serpentine form of unknown aquatic animals, a single type is best. Due to our reading of the data, we have decided to reach back and rename this group of cryptids the Classic Sea Serpent. We are unperturbed that this animal may turn out to be a mammal rather than a giant reptilian serpent. Attempts to disassociate the serpentine forms from the name have not succeeded. Witnesses, monster hunters, and the media all talk about "Sea Serpents"—not, as Heuvelmans would have it, as Super-otters, Super-eels, and Many-humpeds.

For our second type, the **Waterhorse,** we have combined categories of ancient cultures, Oudemans's insights, and Heuvelmans's dichotomy of forms. While Heuvelmans considered Oudemans shortsighted for not considering more animals, we conversely feel that Heuvelmans's use of two types—Merhorse and Long-necked—failed to take into account remarkable similarities. Heuvelmans sometimes tried to fit square data into circular pigeonholes, explaining away reports of manes, for instance, as mistakes by witnesses who may have seen foam, dorsal fins, or crests, so that the case would fit into one type or another. Heuvelmans probably wrongly stipulated that these Merhorses could only have a short and thick

neck, and that all Long-neckeds have tails (even though only a handful of such sightings exist). Certainly, we can appreciate the task that Heuvelmans had before him; but a more comprehensive and inclusive categorization of the Merhorse and the Long-necked into one broader type seems appropriate.

Our desire to group the Long-necked and the Merhorse into a single type of animal is actually nothing new, and goes back to Oudemans's original analysis of Sea Serpent reports. Others have also felt that a deeper truth lies underneath Heuvelmans's two types. In 1974, Peter Costello, author of *In Search of Lake Monsters,* wrote that the "two animals are so similar that I am inclined to think that they are actually the same animal, and that the variations are due to sexual differences." Others also support our view, as shown by this comment from science writer Matthew Bille, author of *Rumors of Existence,* during an Internet exchange of May 2002: "I suggest the 'Merhorse' reports and some of the 'Long-necked' ones are due to a single animal, with considerable variation between sexes and individuals (and maybe regional or subspecific types)."

Our christening of the second type, the Waterhorse, mirrors exactly the name given by North Atlantic marine observers more than 500 years ago, and is linked to the Water-Kelpie name from the Scottish highland lakes. The distinctive moniker therefore solidly combines the Merhorse and Long-necked creatures into a single type, which we find occurring in the oceans, seas, and lakes around the globe today.

Our next type of animal, the **Mystery Cetacean,** adds a category that Heuvelmans never even considered. Several of these animals—two-finned whales, mystery ziphiids, mystery orcas—are being reported as Sea Monsters, and many of them will likely be discovered as new animals in the years to come.

Our fourth and fifth types, **Giant Shark** and **Mystery Manta,** likewise were never covered by Heuvelmans's classification system of

unknowns. These yet-to-be-discovered animals inhabit the same waters that have yielded the surprising megamouth shark. Giant Sharks and Mystery Manta also are reported from some freshwater environments.

Our sixth type, which we call the **Great Sea Centipede** and Heuvelmans called the Many-finned, is one of the most unlikely cryptids for potential discovery due to the fact that no multiple-finned or plated whales, living or fossil, have ever been discovered. Nevertheless, some evidence for it exists, or did until recently. In a similar vein, we have adopted Heuvelmans's classification for our seventh type, **Mystery Saurian,** the giant crocodiles, and modified his Father-of-all-the-Turtles category to **Cryptid Chelonian** for our eighth type, both aquatic longshots. But to Heuvelmans's Turtle category, we have added a subtype to take into account many reports of these animals in freshwater sources.

Our next four types were again not included by Heuvelmans. **Mystery Sirenian** (again with a freshwater subtype) and **Giant Beaver** are probably mammals, while **Mystery Monitor** and **Dinosauria** have reptiles as a model, and in the minds of some researchers, support the notion that dinosaurs still roam the Earth.

Our last two types are the **Mystery Salamander** and, by no means least, the formidable **Giant Octopus.**

We understand that a few of these categories may seem to involve creatures of myth and legend. But we have based all our types on a careful examination of long-term evidence of a biological nature. While parts of our typology may be based on the relatively meager information available, it's worth recalling that several established species of marine animals gained recognition with no more than a skull found on a beach.

A description of the essential qualities of each of our 14 types follows, accompanied by an illustration or illustrations conforming

to the general descriptions of each type or subtype. Within each type section, we have assembled various representative reports and source material that highlight some of the most detailed, more credible, or best-evidenced cases. Accompanying each report is a map of the specific location of each Lake Monster or Sea Serpent sighting, with an X that marks the spot as closely as we have been able to confirm.

Type Descriptions

Classic Sea Serpent

PHYSICAL CHARACTERISTICS

This serpentine creature of the seas is generally quite long, upwards of 100 feet, with rough skin, a distinct head, and a tapering tail. A string of what appear to be dorsal humps, a slender neck of medium length, and noticeable eyes characterize this marine cryptid. Individuals are sometimes speckled or mottled overall, or they may have

dark stripes on the upper body, a white underside, and white stripes on the neck. These animals often appear as a series of protuberances, like a string of buoys, but these may be more a manifestation of the motion of the animals than a physical characteristic. Heuvelmans pointed out that eyewitnesses were likely to be counting the humps the waves left in the wake of these swiftly swimming animals, especially in those cases where eyewitnesses reported dozens of humps.

RANGE

This type is global and marine. But sightings of these Sea Serpents show specific concentrations in the North Atlantic, in the Gulf of Maine, along the Pacific Northwest coast of North America, off the southeastern African coast, in the Indian Ocean, and off Brazil.

As a note of caution, however, the known distribution of any animal is often not merely related to where a species lives, but with where humans are able to encounter them. With reference to these Sea Serpents, reports will proliferate where active shipping, boating, and yachting overlaps with their habitat. But just because there is little human activity around the Arctic Circle, the Antarctic (except near Africa's Cape of Good Hope), and vast areas in the center of the oceans does not mean that these places cannot be active Sea Serpent breeding or feeding areas as well.

HISTORY

As its name suggests, the Classic Sea Serpent has a long history and an abundant literature. For centuries, Sea Serpents were heralded in oral traditions, through legends and travelers' tales, and in illustrations of warning on seafarers' maps. In 1555, Olaus Magnus, the exiled Catholic archbishop of Uppsala, Sweden, attempted to address these creatures scientifically in his survey of Scandinavian zoology. Magnus wrote that the coastal waters housed, in addition to more

conventionally recognized marine animals, serpents "of vast magnitude, namely 200 feet long, and moreover 20 feet thick." They emerged from caves along the shore to devour just about anything in their paths, including the occasional sailor, he stated.

Many educated men of the church would write about Sea Serpents, and seamen and fishermen recognized the creatures as being real animals along with whales and other beasts of the sea. In 1734, a Protestant priest, Hans Egede, was told of a monster, estimated to be 100 feet long, which was seen rising from the water off the coast of Greenland. His son made a record of the report in a book published in 1741. A little more than a decade later, the most influential of the early treatments appeared, *The Natural History of Norway* (1752–1753) by the zoologist and cataloguer Bishop Erik Ludvigsen Pontoppidan, which attested to the presence of large "serpents" in the North Seas. Pontoppidan considered the evidence and concluded that more than one kind of animal was involved. He found that Egede's monster, for example, differed from those seen off the Scandinavian coasts.

"The head in all the kinds," Pontoppidan wrote, "has a high and broad forehead, but in some [as in Egede's] a pointed snout, though in others that is flat, like that of a cow or horse, with large nostrils, and several stiff hairs standing out on each side like whiskers." Quite correctly, Pontoppidan distinguished between the Waterhorse (with its horse-like head and whiskers) and the Classic Sea Serpent.

Seventeenth-century Americans in the Massachusetts colony wrote about the Sea Serpents they saw from ship and shore. The first known printed reference appears in 1674, in John Josselyn's *An Account of Two Voyages to England*, which recalls conversations with locals in 1639 who spoke of "a *Sea-Serpent* or snake that lay coiled upon a rock at Cape Ann." During the Revolutionary War in 1779, Commander Edward Preble and the crew of the American gunship *Protector* spotted and fired upon a Sea Serpent, which ap-

parently escaped unharmed, according to the 1846 biography of Preble by James Fenimore Cooper.

In May 1780, Captain George Little of the frigate *Boston* reported the following experience while in Broad Bay off the Maine coast, according to Heuvelmans in his *In the Wake of the Sea-Serpents*:

> *At sunrise, I discovered a huge Serpent, or monster, coming down the Bay, on the surface of the water. The cutter was manned and armed. I went myself to the boat, and proceeded after the Serpent. When within a hundred feet, the mariners were ordered to fire on him, but before they could make ready, the Serpent dove. He was not less than from 45 to 50 feet in length; the largest diameter of his body, I should judge, 15 inches; his head nearly the size of that of a man, which he carried four or five feet above the water. He wore every appearance of a common black snake.*

The most spectacular of all the American Sea Serpent sightings occurred over several years in the second decade of the nineteenth century along the northeastern tip of Massachusetts. Numerous well-regarded citizens spotted "Serpents" in the ocean. A typical sighting, as noted in *In the Wake of the Sea-Serpents*, is that of Samuel Cabot who on August 14, 1819, saw

> *an object emerging from the water at the distance of about one hundred or one hundred and fifty yards, which gave to my mind at the first glance the idea of a horse's head. . . . I perceived at a short distance eight or 10 regular bunches or protuberances, and at a short interval three or four more. . . . The Head . . . was serpent shaped[;] it was elevated about two feet from the water . . . . [H]e could not be less than 80 feet long.*

An investigation by the Linnaean Society of New England in 1817, two years before Cabot's sighting, had already demonstrated a striking consistency in witness descriptions, nearly all of which consisted of a giant snake-like animal, dark on top, lighter beneath, which moved in an undulating fashion. As even Richard Ellis, a writer on oceanography and a mostly skeptical commentator on cryptozoological claims, observes in his 1994 book, *Monsters of the Sea*, the Massachusetts sightings remain among "the great unsolved mysteries of Sea-Serpent lore."

By the mid-nineteenth century, however, ridicule had already begun to surround the subject. "It has been the fashion for . . . many years to deride all records of this very celebrated monster," noted *Zoologist* editor Edward Newman in an 1847 editorial, though he and other well-positioned scientists continued to champion the Sea Serpent.

An 1892 book by the respected Dutch biologist A. C. Oudemans, *The Great Sea Serpent*, commanded a wide readership, though his contemporaries and most subsequent theorists on the subject would largely ignore his theory about giant seals as the "true" Sea Serpent.

While the twentieth-century media focused on another variety of monster, Scotland's Loch Ness Monsters—which seemed to fit the Waterhorse type (in the next section)—Classic Sea Serpent sightings continued. Among the most impressive were those off the coast of British Columbia, where a creature given the tongue-in-cheek name Cadborosaurus—almost immediately shortened to Caddy—has figured in more than 300 reports since the 1930s. This large snake-like creature has been reported from Alaska to Oregon, with most of the sightings occurring in the inland waters around Vancouver Island and the northern Olympic Peninsula, but especially in Cadboro Bay, near British Columbia's capital city of Victoria. Sightings of Cadborosaurus also figure in Aboriginal legend,

and some petroglyphs from Aboriginal sources appear to depict the animal.

Several serious treatments of the Classic Sea Serpent appeared in the middle of the twentieth century. One was Scottish-born zoologist Ivan T. Sanderson's groundbreaking article on Sea Serpents in *The Saturday Evening Post* in 1947. The following year, the German-born zoologist Willy Ley began writing about what he called the "Great Unknown of the Seas" in his books. Also in 1948, natural-history writer A. Hyatt Verrill began pushing plesiosaurs as an explanation for all Sea Serpent reports. And in 1953, British Museum of Natural History keeper Maurice Burton wrote that giant eels were likely responsible for Sea Serpent reports.

Then in 1956—"an important year in the recent history of the Sea Serpent," according to Heuvelmans—Ivan Sanderson's book, *Follow the Whale*, was published. In it, for the first time in the twentieth century, ancient whales and specifically zeuglodons were proposed as the solution to the Sea Serpent mystery. Heuvelmans felt that Sanderson had, in one passage, discovered "the key to the whole of the problem of the great serpentiforms." Using examples from known animals, Sanderson explained the two ways in which animals could evolve into larger animals in the ocean. One, the evolutionary and developmental route taken by the modern right whale, was to assume a spherical form; the other, taken by the big rorquals, the baleen whales, was to become longer and longer. Sanderson wrote that undiscovered 200-foot-long creatures—in other words, Sea Serpents—"will probably prove to be greatly elongated or serpentine in form."

After World War II, new sightings of Sea Serpents failed to receive national attention. But local newspapers continued to record sightings of Caddy off British Columbia, Bobo off Cape San Martin, and the Old Man of Monterey Bay. In the 1960s, sightings were also recorded off Africa, Iceland, and Massachusetts.

Then, in the 1970s, a new American Sea Serpent grabbed the attention of the nation's capital and *The Washington Post*. Employees of the Central Intelligence Agency and ordinary tourists alike reported seeing a Classic Sea Serpent in and around Chesapeake Bay. On May 31, 1982, Robert Frew shot a video of an unknown creature, estimated to be 30 to 35 feet long but only a foot in diameter, in Chesapeake Bay (see case, pages 66–68). Newspapers quickly dubbed it Chessie, in imitation of Nessie. In August of that year, seven scientists from various disciplines convened at the Smithsonian Institution to analyze the video. In a report summarizing their conclusions, George Zug of the Smithsonian Museum of Natural History declared, "We could not identify the object," though it appeared "animate." He went on to state, "These sightings are not isolated phenomena, for they have been reported for the past several years."

Classic Sea Serpent sightings continue today around North America, although the media tend to give them less attention than Lake Monster reports. At least 20 sightings of Caddy occurred during the 1990s, while a Sea Serpent called the Altamaha-Ha was being seen off the coast of southern Georgia, near Darien. In 1997, a Sea Serpent was still being reported off the coast of Newfoundland, according to June O'Neill's 1999 book, *The Great New England Sea Serpent*, just as it had been for nearly four centuries. For those interested enough to notice, the Classic Sea Serpent still roams the seas.

CANDIDATE

Rejecting the popular notion that these creatures were giant snakes, Dutch zoologist Antoon Cornelis Oudemans had proposed in his 1892 book, *The Great Sea Serpent*, that these Sea Serpents might be ancient whales or zeuglodons, which disappeared from the fossil record some 20 million years ago. But he later turned his back on the idea. In the 1960s, Sanderson and Heuvelmans brought zeuglodons back into the debate. And by the 1970s, University of Chicago biol-

ogist Roy Mackal had become a strong proponent that some forms of Sea Serpents were most likely zeuglodons.

There is much to recommend the zeuglodon hypothesis. Many of the reports describe animals that at least look like zeuglodons. Moreover, the undulating motion widely noted in the sightings is characteristic of mammals, not of reptiles. Like whales, the Classic Sea Serpent has a lateral—horizontal rather than vertical—tail. After a careful analysis of Canadian reports, especially of Caddy, Mackal declared that the characteristics observed "fit one and only one known creature"—the zeuglodon.

But paleontologist Darren Naish argues that zeuglodons have been missing from the fossil record for so long that their continued survival is implausible. Instead, he feels that another candidate, a remingtoncetid—"a bizarre group of large skulled basal cetaceans," as he described them in 1996 in *Fortean Studies*—may be a better bet in accounting for some aquatic monster reports. He is skeptical, however, and writes that most other reports of Sea Serpents are merely of delphinidans—beaked whales and dolphins, both known and unknown.

TYPE:

Classic Sea Serpent

Descriptive Incident:

DATE: Mid-July 1937

LOCATION: Naden Harbor, Queen Charlotte Islands, British Columbia

WITNESSES: Jim Wakelen, F. S. Huband, William Hageland, photographs

In the 1980s, Vancouver zoologist Edward L. Bousfield and oceanographer Paul H. LeBlond were gathering and analyzing reports of animals known collectively as Caddy, which were being reported in the waters off the Pacific Northwest coast of North America. They found that Caddy "is basically fifteen to forty-five feet in length, serpentine, with flexibility in the vertical plane, having a horselike or camel-like head, a long neck, vertical humps or loops in the body, a pair of side flippers, spikes on a fluke-like tail, and an ability to swim at speeds of forty knots."

After word of their interest circulated in British Columbia, a former whaling captain, William Hageland, contacted them with a strange story. Captain Hageland had previously written up the story in his 1989 book, *Whalers No More.* In the summer of 1937, while towing in, cutting up, and rendering giant baleen whales and toothed whales at the whaling station at Naden Harbor, a remark-

able animal emerged from the stomach of a sperm whale, which is a type of toothed whale known for its deep dives to capture and eat prey. The whale had been killed in mid-July, off Langara Island, Hageland discovered. The animal that popped out of the whale's gut was unusual enough that the station manager, F. S. Huband, was contacted, and many of the station's personnel, such as blacksmith Jim Wakelen, came to view the remains.

Huband found the specimen so noteworthy that he had the creature laid out on a five-foot table for photographs. Boxes and white sheets were used to create contrast, and several photographs were taken, some of which have been rediscovered. Hageland published one in his book, where it was labeled a "sea oddity," another had been published in a local newspaper, and as LeBlond and Bousfield would discover, yet another was in the British Columbia Provincial Archives.

LeBlond and Bousfield learned that Hageland's photo came from a folder of 38 photographs by G. V. Boorman, the whaling station's first-aid officer. The last two photographs in the folder were of the unidentified carcass. LeBlond and Bousfield thus determined that there are three different known photographs remaining of the carcass taken with two different cameras.

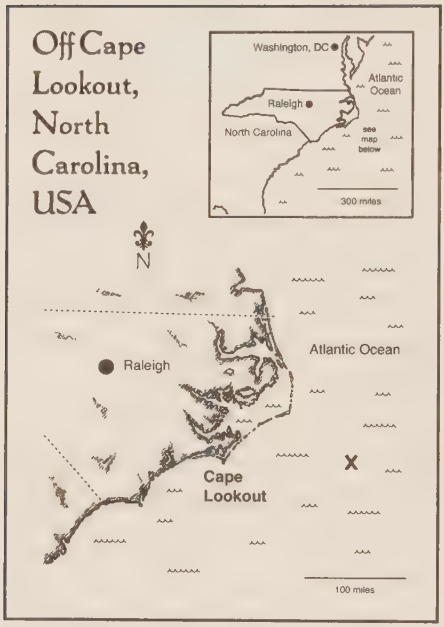
The photos show that the carcass did not have scales, hair, or thick blubber, but the dog-like head is obvious, as are traces of an eye and a mouth. The neck seems to have been crushed by the whale when it was swallowing the animal. Nevertheless, two short foreflippers are visible, and perhaps two rear ones (which look like a tail to some). A crest down the back is apparent. The towing of the whale would have taken 10 to 12 hours, so some digestive processes had begun on the carcass.

While the photographs remain, no record of the body exists. Whether any of it was preserved is unknown. Boorman's album contains a note that part of the body was shipped to the Nanaimo

Biological Station, where Francis Kermode, who had been trained in taxidermy but not zoology, declared that it looked like a premature baleen whale. The carcass was not taken seriously after that and was hastily disposed of.

LeBlond and Bousfield feel that the verdict itself may have been premature, causing the physical record of an unknown marine cryptid to slip through the hands of science. Today, the only records of the Naden Harbor carcass are the three archival photographs from 1937, which hint at a strange mix of mammalian and reptilian traits, as might be found in a zeuglodon.

Source: Paul H. LeBlond and Edward L. Bousfield, *Cadborosaurus: Survivor from the Deep* (Victoria, B.C.: Hosdal & Schubart, 1995).



TYPE:

Classic Sea Serpent

Descriptive Incident:

DATE: December 30, 1947

LOCATION: Off Cape Lookout, North Carolina

WITNESSES: John Axelson, William Humphreys, John Rigney, Captain Fordan, and one unnamed crewmember

At 11:55 a.m., the *Santa Clara*, a 441-foot-long passenger ship carrying 52 had just crossed the Gulf Stream, 118 miles due east of Cape Lookout, off the coast of North Carolina. John Axelson, the third mate, was preparing for a noon sighting of the sun on the starboard side of the bridge when he spotted something strange in the water, "a head and about 30 feet of body" just behind the forecastle.

"Look," Axelson yelled, and chief mate William Humphreys and navigation officer John Rigney, who were near the wheelhouse, jumped toward the rail in time to see a commotion behind the *Santa Clara*'s stern. "The middle part of the body came up above the surface," recalled Humphreys. "It looked slick, and dark brown."

Axelson realized that the ship had actually collided with this animal. "About 60 feet astern, it sort of humped over and started threshing around in the water. Different sets of coils appeared on

the surface. The water turned white and red and oily. It reminded me a little of the way the water looked when a depth bomb got a submarine, during the war."

The ship's commander, Captain Fordan, came running up from below when the collision occurred, but only managed to catch sight of a distant "churning in the water." Following normal procedure when a ship runs across anything that may be a navigation hazard, the *Santa Clara* sent a radio message to the United States Hydrographic Office:

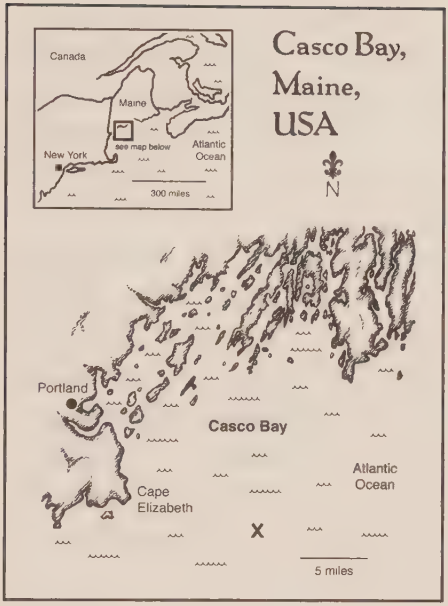
> LAT 34.34 N LONG 74.07 W 1700 GCT STRUCK MARINE MONSTER EITHER KILLING OR BADLY WOUNDING IT PERIOD ESTIMATED LENGTH 45 FEET WITH EEL LIKE HEAD AND BODY APPROXIMATELY THREE FEET IN DIAMETER PERIOD LAST SEEN THRASHING IN LARGE AREA OF BLOODY WATER AND FOAM . . .

The message was relayed to the Coast Guard and immediately picked up by the Associated Press and *The New York Times*. The next day, Captain Fordan issued a formal statement with additional details:

> *The creature's head appeared to be about two and one-half feet across, two feet thick and five feet long. The cylindrically shaped body was about three feet thick, and the neck about one and one half feet in diameter. As the monster came abeam of the bridge it was observed that the water around the monster over an area of 30 or 40 feet square was stained red. The visible part of the body was about 35 feet long. It was assumed that the color of the water was due to the creature's blood and that the stem of the ship had cut the monster in two. . . . There were no fins, hair or protuberances on the head, neck or visible parts of the body.*

A total of five seamen had seen the same mortally wounded creature, an event they later regretted having reported. The crew was widely ridiculed in the press, with some observers implying that they must have been drunk. Others were convinced that the ship had collided with an oarfish—though the largest known specimen measured only 21 feet—or a large porpoise, or a whale. But the crew was a seasoned one, familiar with creatures of the sea, quite responsible, and definitely not drunkards. The story stands today as one of the most famous Sea Serpent cases of all time.

Source: Gary S. Mangiacopra and Dwight G. Smith, "The Santa Clara Disaster of 1947: An Unfortunate Encounter for All Concerned," *The Anomalist* 7, Winter, 1998–1999.



TYPE:
Classic Sea Serpent

Descriptive Incident:
DATE: June 5, 1958
LOCATION: Casco Bay/ Gulf of Maine, Maine
WITNESSES: Ejmar Hairgaard and Ole Mikkelsen

In 1985, an elderly Scandinavian man cautiously approached the speaker who had just given a talk on cryptozoology before the Appalachian Mountain Club. The man told the speaker, Loren Coleman, that a friend of his had seen a Sea Serpent. The man was Ole Mikkelsen of Portland, Maine.

When Coleman interviewed Mikkelsen, the fisherman began to relive his experience, the date exploding from Mikkelsen's lips: "The fifth day of June 1958! I won't soon forget it."

In 1985, Mikkelsen was not only trim, muscular, and tanned, but alert and active for a man of 81. He told Coleman that he had been fishing since he was six and continued to do so up through 1984. Born and raised in Denmark, he had come to Maine in 1923, and he knew the waters of Casco Bay well. But he had never seen anything before 1958 to prepare him for the monster he saw that June.

The fifth had started like most workdays for Mikkelsen. Up early, he and his partner, Ejmar Hairgaard, since deceased, were out to sea before daybreak. Mikkelsen recalled that it was about a half hour after sunrise, about 6 A.M., when they first saw "it." They were about five miles off Cape Elizabeth, only about one and a quarter miles south of the Portland Light Ship.

"Suddenly," Mikkelsen recalled, "we saw an object coming toward us out of a haze; we took it to be a submarine, but as it came near we discovered it was some live thing. As it came still nearer it dove down and a tail came up out of the water, and slowly it went down again. In about three or four minutes it surfaced again, came near us, and dove again. Then it came up once more about 125 feet away from us and stopped as if to look us over."

At that point, Hairgaard shouted, "Give me the knife; if it comes nearer, we'll cut the nets and run for the lightship!"

"But luckily," Mikkelsen said, "it decided to swim in a nice turn to the south of us. We saw it disappear to the southeast in the haze."

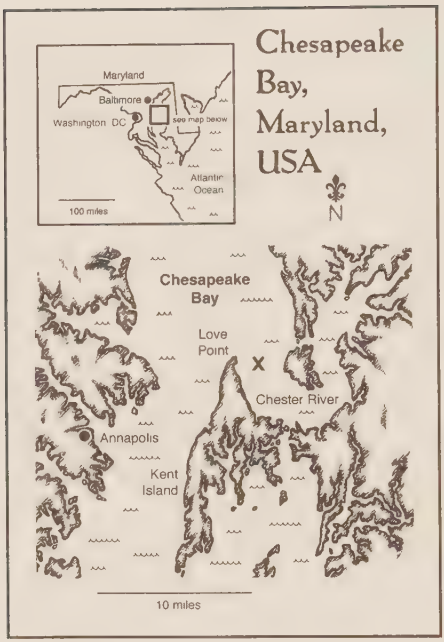
Not surprisingly, Mikkelsen's metaphors and frames of reference related to his years of fishing. He said the thing's color was like that of a cusk, a light-brown North Atlantic food fish, with a lighter underside to its neck. He said the tail was like a mackerel's. But of course, he knew it was not a cusk or a mackerel.

Mikkelsen was certain that what he saw was well over one hundred feet long. The head stuck out of the water and was broader than the long neck it was on. He could not pick out any ears or eyes, but he is certain it could hear.

Mikkelsen reported that every time the Portland Light Ship blew its mournful foghorn, as the anchored Coast Guard vessel did regularly, the creature turned its head in that direction. Hairgaard and Mikkelsen had the creature in view for more than 45 minutes, and they regularly saw the creature's head rotating toward the sound of the lightship's horn.

The Mikkelsen report fits well into the body of reports dating back to the eighteenth century from the waters northeast of Maine, in Broad Bay in 1751 and in Penobscot Bay in 1779, when Sea Serpents were sighted by men fishing the same waters. During June and July 1818, fishermen told of seeing a Sea Serpent in Portland Harbor. Many sightings occurred off Woods Island, Maine, in the early 1900s. And Eastport, Maine, was the scene of encounters in the late 1930s and in 1940.

Sources: Interview with Ole Mikkelsen of Portland, Maine, by Loren Coleman, 1985; "Portlandiana: Casco Bay's Sea Serpent," *Portland Monthly,* May 1986; Loren Coleman, *Mysterious America: The Revised Edition* (New York: Paraview, 2001).



TYPE:
Classic Sea Serpent

Descriptive Incident:
DATE: May 31, 1982
LOCATION: Chesapeake Bay, Virginia
WITNESSES: Robert and Karen Frew

Sea Serpents have been reported off the coast of Virginia at least as long ago as 1846, when Captain Lawson reported seeing a small-headed creature with sharp projections on its back between capes Charles and Henry. But of late, most of the attention in the area has been focused on a serpent-like creature observed in the Chesapeake Bay named Chessie.

Reports of a large, snake-like animal seen in Chesapeake Bay and its tributaries made the news for a short time in the late 1960s. Then in 1978, a retired CIA employee, Donald Kyker, reported seeing four Chessies about 75 yards offshore. His neighbors, the Smoots, also saw the creatures. In 1980, four charter boats carrying 25 people observed Chessie. Witnesses generally agree that Chessie appears to be 25 to 40 feet long, a little less than a foot across, dark, with no limbs, no fins, nor many details on its oval head.

Then, on May 31, 1982, around 7:30 P.M., Maryland residents Robert and Karen Frew saw one of these animals in a bay at Love Point, near the northern tip of Kent Island and mouth of the Chester River in Virginia. Grabbing his videotape camera, Frew taped the long, dark, serpentine form swimming just a hundred feet away from their Kent Island home in Chesapeake Bay. The creature was seen cruising along toward a group of swimmers before diving beneath them and reappearing on the other side of the swimmers. The two minutes of videotape clearly show an animate object.

At the time, Michael Frizzell and the Enigma Project were involved in investigating and documenting reports of Chessie. On August 20, 1982, the Enigma Project was able to show the Frew videotape to zoologist George Zug and other scientists at the Smithsonian Institution's Museum of Natural History.

"After thoroughly examining the tape," Frizzell reported, "the scientists, although intrigued by what it apparently depicted, were unable to reach any conclusions about the 'animate' object shown. The videotape's quality was simply not good enough to allow such a determination."

Subsequently, scientists at the Johns Hopkins Applied Physics Laboratory in Laurel, Maryland, offered to perform a computer image enhancement of the creature in the Frew Tape in an effort to extract from it more information than the Smithsonian scientists had been able to obtain. "The computer work initially conducted isolated an impressive, unmistakable, serpentine shape from the surrounding waters," reports Frizzell. "Unfortunately, soon after the enhancement techniques began, the internal funding that the Applied Physics Laboratory allowed for the Frew videotape work ran out."

Since 1983, the videotape has remained in limbo, but reports of Chessie continue.

Sources: Michael A. Frizzell, "The Chesapeake Bay Serpent," in Craig Heinselman (ed.), *Dracontology*, 2001, pp. 129–132; "Chessie," Enigma Project website, umbc7.umbc.edu/~frizzell/chessie.html, 2002; Bernard Heuvelmans, *In the Wake of the Sea-Serpents* (New York: Hill and Wang, 1968), p. 174.

TYPE:
Classic Sea Serpent

Descriptive Incident:
DATE: October 31, 1983
LOCATION: Stinson Beach, California
WITNESSES: Mark Ratto and four coworkers

Since 1976, long, serpentine animals have frequently visited the waters near San Francisco Bay. Agate Beach and Stinson Beach have proved to be good viewing areas. During October and November of 1983, several sightings occurred involving a dark, eel-like creature apparently cruising up and down the north-

ern California coast (particularly near Stinson Beach, north of San Francisco, and at Costa Mesa). Some people saw the creature through binoculars.

While working on Route 1 just north of the Golden Gate Bridge at 2:30 P.M., on October 31, 1983, a construction crew saw a gigantic beast swimming just under the surface of the water. Mark Ratto and four other road construction workers observed the creature for a good while from a cliff above Stinson Beach. The black creature looked to be 100 feet long and 5 feet in diameter. At various times, they saw it swimming toward the cliffs, thrashing its head about, and speeding along at a good clip.

Ratto watched it through binoculars and said it appeared to be followed by about 100 birds and two-dozen sea lions. He saw a small head and neck that "came up to look around" plus three coils or body humps.

The publicity from the construction workers' sighting resulted in many older sightings being reported to the media, as well as a continued interest in cases that followed it. One of these occurred on February 5, 1985, at around 7:45 A.M., near Stone Tower Point in San Francisco Bay. While drinking coffee in their car near the seawall, Robert and William Clark, who are twins and business partners, noticed two seals swimming extremely quickly across the bay. They then saw that a large, black, "snake-like" or tubular animal was chasing the seals. The creature moved by forming its body into humps and wiggling up and down. The animal appeared to have small, translucent fan-like fins that acted as stabilizers. The twins saw the creature several times in the weeks that followed, and have since become the major chroniclers of the area's reports.

Sources: Joan Reutinger, "Sea Serpent Seen Off Stinson Beach Coast," *Coastal Post*, November 7, 1983; Richard Greenwell, "'Sea Serpents'

Seen off California Coast," *ISC Newsletter* 2, no. 4, Winter 1983, pp. 9–10; Bill and Bob Clark, "The San Francisco Sea Serpent," *Crypto Dracontology Special Issue 1,* 2001, pp. 7–19.

TYPE:

Classic Sea Serpent

Descriptive Incident:

DATE: June 1, 1999

LOCATION: Ålesund, Norway

WITNESSES: Arnt Helge Molvaer and Per Tore Molvaer

Arnt Helge Molvaer had gone for a walk along the fjord near the town of Ålesund on the northwest coast of Norway, when he saw a strange creature swimming from the left, parallel to the shore. It appeared to be about 90 feet long and 4.5 feet wide. A third of the way back from the head was a short dorsal fin, somewhat square and higher at the front. He watched the strange animal for about ten minutes through his binoculars before he decided to run home for his video camera.

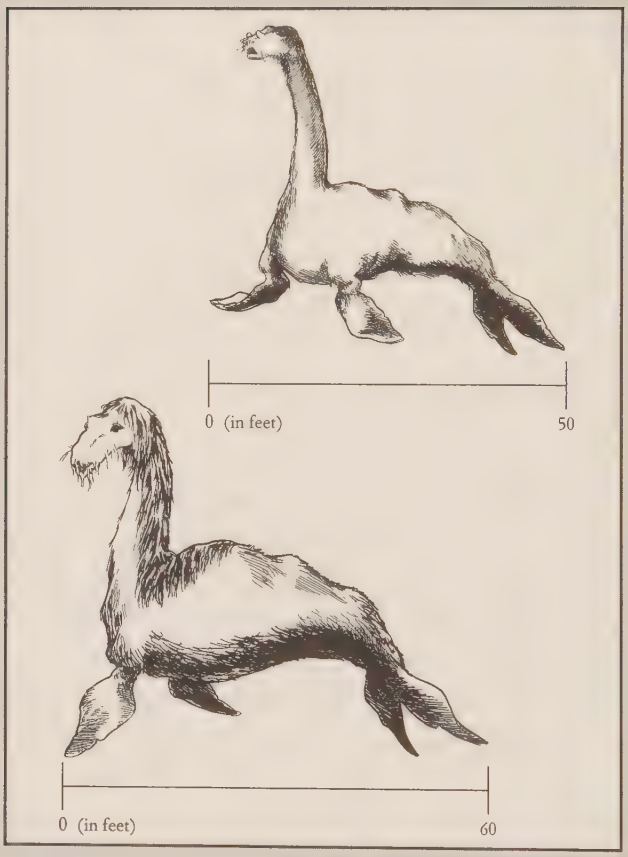
Less than an hour later, Molvaer, along with his son Per Tore from Sula, saw the creature again in the fjord and videotaped the unknown animal. Broadcast news footage showed an obviously living creature displaying its fin above the surface, creating a powerful wake as it moved toward a floating whale carcass out in the fjord.

Molvaer later told cryptozoologist Erik Knatterud that his son thought the animal resembled an anaconda, "only it was much, much bigger." Knatterud also learned that as the animal swam on the surface of the water, it kept its head submerged. The head was as thick as the "neck" and looked like a gigantic serpent's head, somewhat square in front. There was no obvious neck, as the thickness of the body just grew larger from the head back to the thickest part of the body. The creature was brown along the entire back, with the sides being a little lighter brown tone. Its underside was not visible.

Molvaer thought that he saw the animal moving by *horizontal* undulations, very much like terrestrial snakes do when on land or in water. At this point, Molvaer was positioned high above looking down at the animal, which was swimming 600 feet from shore. After passing Molvaer, the animal detected the whale carcass and dragged it away from the shore, "at quite a speed," according to Molvaer, who was astonished at its strength and agility. As the animal began feeding on the whale carcass far out in the fjord, Molvaer, looking through his binoculars, was able to observe vertical undulations.

When Molvaer returned with his video camera and his son, the animal was still eating the carcass. In fact, Molvaer told Knatterud that the video actually shows *two* animals feeding off the whale carcass, from opposite angles.

Source: Erik Knatterud, Database of Norwegian Sea Serpents website, mjoesormen.no, 1999, 2001.



Waterhorse

PHYSICAL CHARACTERISTICS

The Waterhorse is a gigantic freshwater and marine cryptid. It has an elongated body and neck, with a rounded body showing above the water, and two sets of flippers (with the rear ones together fre-

quently giving the appearance of a tail). The animal often exhibits a mane and, when seen at close range, seems to be covered lightly with hair. The Waterhorse seems to have rather poor eyesight but an acute sense of hearing.

Observers report several sizes and forms, variations that are probably due to age, regional, and gender differences. Sexual variation, in particular, is probably responsible for the appearance of two distinct categories within the Waterhorse type; one larger and hairier, the other smaller with smoother skin and what appears to be a longer neck in proportion to a slighter body.

The **Long Neck** (named after Heuvelmans's Long-necked) is 30 to 70 feet long, with a small head at the end of a long, slender neck. Some observers report bumps or stalks on the head. The Long Neck has been seen not only in marine environments, it is the animal traditionally reported in freshwater lakes and rivers; this is the "classic" image of Nessie. The Long Neck, which is generally smaller than the other category of Waterhorse, appears to reflect the female of the species.

The **Merhorse** (after Heuvelmans's like-named major type) has a body 40 to 100 feet long with a thin, horse-like head, prominent eyes, smooth skin, and a flowing mane and whiskers. Some are said to have beards. The Merhorse is the male of our Waterhorse combination. The feature that originally gave the creature its name, the mane on its back, is a long, flowing line of hair—much like a horse's mane—that extends down over most of the body, though it is heavier on the neck and lacking on the terminal tail. Merhorses are fast swimmers that can submerge dramatically in a vertical manner, as if suddenly pulled downward.

RANGE

The Waterhorse is cosmopolitan, found in marine, fjord, lake, and river environments. The loughs, lochs, and lakes are generally sim-

ilar from location to location; they are deep and often steep-shored at spots along the water's edge. These cryptids inhabit specific belts of lakes that are located in what are called the "Monster Latitudes" (see pages 267–270). Lengthy-necked, maned Sea Serpents and Lake Monsters tend to cluster in certain areas around the globe—in the oceans as well as in freshwater lakes and rivers—at latitudes near isothermic lines 50°F, between 32°F and 67°F, especially in the Northern and perhaps the Southern hemispheres.

HISTORY

The Water-horse of folklore, as Michel Meurger notes in his *Lake Monster Traditions*, is one of the oldest images described by the chroniclers of the Sea Serpent. It appears in Olaus Magnus's descriptions in 1555 and throughout the North Atlantic on ocean maps of 1585. From ancient times to the 1500s, marine "Sea Serpents" were described as either maned sea animals (our Waterhorse) or as long, serpentine-shaped marine creatures (our Classic Sea Serpent). In Norway, the Waterhorse and the Classic Sea Serpent would occasionally do battle in the fjords. But, as Meurger points out, *within* the Waterhorse category were not only the "water-horses" but the "water-bulls" as well, and these apparently got along more peacefully, as one might expect of the male and female of the same species. In Sweden and Norway, some maned monsters (Merhorses?) were showing up in lakes, while in Scotland, the mating of "water-horses" (Merhorses?) and "water-bulls" (Long-Neck?) was said to have taken place.

In Scotland, the highland Gaelic traditions tell of the *Each-Usige,* the Water-kelpie, or Waterhorse. According to old Scottish legends, these creatures appeared to be dark-colored ponies that had long, flowing manes and often would lure adults and children into riding on their backs, after which they would plunge into the water to drown their riders. Maidens were warned to recognize the Kelpie

by the fact that its hair was wet, matted, and tangled with water vegetation. Said to spend the daylight hours in the deep parts of a loch, it supposedly rose to the surface at dusk, looking like a large black horse.

Intriguingly, in terms of the dual (male and female) nature of the Waterhorse, another associated Gaelic folkloric creature lumped under the Waterhorse umbrella is the Water-bull, which had what looked like two horns on its head (like the bumps reported on the Long Neck's head). Indeed, while studying the folklore of Loch Shiel of Ireland during the late 1990s, researcher Nick Sucik discovered that the proper name given to the long-necked animals was (Gaelic) *Tarbh'usiage* (Water-bull). As far back as 1823, in a pamphlet about Gaelic Lake and River Monsters, two different types of creatures were noted: the aggressive Water-kelpies and the harmless Water-bulls. In these ancient tales, we find, are the elements of both subtypes of what we call the Waterhorse.

The accounts from the Middle Ages are difficult to track, as locations and eyewitnesses fade into the historical fog and become tales and hints of monsters at the ends of the Earth. The 1700s saw the folklore of the past turn into actual sightings of the Waterhorse by sailors. From these times and these events, the sighting details begin to translate into noteworthy biological discussions. From 1779 through 1799, while the Classic Sea Serpent was being spotted off the coast of New England, the long-necked Waterhorse and the maned, large-bodied Waterhorse were being seen in Penobscot Bay, Maine, both singularly and in pairs.

During the eighteenth century, sightings occurred on both sides of the Atlantic. For instance, in 1846, Captain Christmas of the Danish Navy saw an enormous, long-necked beast pursuing a group of dolphins between Iceland and the Faroe Islands. He described the creature as having a horse-like head and a neck as thick as a man's waist, "moving gracefully like a swan's."

One of the most famous Sea Serpent sightings of all time took place around 5 P.M. on August 6, 1848, near the Cape of Good Hope, 300 miles off the western coast of southern Africa. On the frigate, HMS *Daedalus,* the officer of the watch noticed an unusual animal swimming toward the ship, and sent up an alarm to the crew. Captain Peter M'Quhae and five other men had an excellent view of what M'Quhae would tell *The Illustrated London News* was "an enormous serpent, with head and shoulders kept about four feet constantly above the surface of the sea, and as nearly as we could approximate by comparing with the length of what our main topsail yard would show in the water, there was at the very least 60 feet of the animal a *fleur d'eau,* no portion of which was, to our perception, used in propelling it through the water, either by vertical or horizontal undulation." Captain M'Quhae later noted that this "Sea-Serpent of extraordinary dimensions" (60 feet long) had a diameter of "15 or 16 inches behind the head, which was, without any doubt, that of a snake" (although some thought has been given to the fact that only the back was showing), and that "it had no fins, but something like the mane of a horse, or rather a bunch of seaweed, washed about its back."

The autumn of 1883 produced a sighting of two horse-headed animals, one of which appears to have been a juvenile. The American whaler *Hope On* was near Las Perlas Archipelago south of Panama, in the Pacific, when Captain Seymour reported that most of the crew viewed a 20-foot-long creature with a horse-like head and two horns showing from the top. It had a brownish hide speckled with black dots, and four legs or double-jointed flippers, with a tail that seemed to be divided into two parts (the rear flippers apparently rose out of the water as the creature submerged). It was followed by a smaller, shorter-necked version of the same creature.

Also in 1883, in the Bristol Channel, a large sea-going animal

with a long neck was sighted that left a greasy trail in the water—a trait sometimes exhibited by seals and sea lions.

The task of collecting and analyzing the overwhelming number of sightings would fall to Dutch zoologist Antoon Cornelis Oudemans, whose 1892 book, *The Great Sea Serpent*, was the first book completely devoted to a cryptozoological subject.

Still, the sightings continued. In 1893, the British ship *Umulfi* encountered an 80-foot Sea Serpent off the Mauretanian coast. It had a smooth, dark-brown skin, three humps, and a 15-foot-long neck. Captain Cringle reported that the monster had eyes, teeth showing in the jaws, and was traveling at about ten knots. That same year, Dr. Farwuhar Matheson and his wife were sailing between Skye and the mainland, off Scotland, when they saw a long, straight, "neck-like thing as tall as a mast." He compared it to a saurian and a giraffe. It had a "sort of ruffle at the junction of the head and neck"—in other words, a mane. Matheson says that it "was not a Sea-Serpent, but a much larger and more substantial beast," thus making the judgment that an "eel could not lift up its body like that, nor could a snake."

In April 1907, at Cobh Harbor, Cork, Ireland, Captain Rostron was bringing in his *Campania* when he and his junior officers saw a long-necked creature with bumps on its head. The head rose out of the water almost nine feet and appeared to be a foot across. Then on August 5, 1919, while on holiday working on a boat in the Orkney Islands, Scottish attorney J. Mackintosh-Bell saw a black-eyed, dog-headed, whiskered monster with "a long neck as thick as an elephant's front leg, all rough looking like an elephant's hide." The neck stuck more than six feet out of the water, and he could see the huge body, tail flippers, and two front flippers. In 1923, Captain F. D. B. Haselfoot of the HMS *Kellet* saw a long-necked beast—with distinctive hair around its mouth, like a whisker, a beard, and a

mane—as he patrolled the Black Deep part of the Thames Estuary that had been closed to sea traffic due to World War I (and was still closed in 1923). The neck looked to be about ten feet long.

The long-necked and maned Waterhorses being reported in the North Atlantic were also seen on occasion off Africa, South America, and Australia. But the other great concentration of reports took place off the Pacific Northwest with a beast called Cadborosaurus. Before long, the nickname Caddy became the umbrella term for Waterhorses seen in this part of the world, though some Classic Sea Serpent reports were also seen in the area and lumped with the Caddy reports.

As noted earlier, marine scientists Paul LeBlond and John Sibert tried to sort out the Caddy reports in a formal paper entitled "Observations of Large Unidentified Marine Animals in British Columbia and Adjacent Waters," published in 1973. The LeBlond/Sibert Sea Monster survey documented eyewitness sightings up and down the British Columbia coast. Questionnaires went to lighthouse keepers, fishing clubs, marinas, and local newspapers. Results helped classify the unknown marine animals there into three main types, two "Merhorses," with horsy heads, long necks, short, dark-brown fur, and/or little horns and long, floppy manes; and a long, loopy, serpentine creature with a dorsal fin along the length of its back. LeBlond and Sibert divided their Merhorses up also because one had "dewy" eyes, and the others were "squinty." So in their study, LeBlond and Sibert ended up with something in the waters of the northeastern Pacific like Heuvelmans's Merhorse, but without a mane, and something like Heuvelmans's Long-necked, but with a mane!

The confusion between the two types is rather remarkable, and merely reinforces the blurring lines between the two. From the 1800s to the present, the reports of Cadborosaurus include sightings describing bumps on the head of smooth-skinned, long-necked

beasts; maned long necks; and some very hairy massive humped creatures. Indeed, newspapers reporting on the Waterhorse-type beasts began referring to two kinds—Caddy, the male, and Amy, the female. Today, hardly anyone hears about Amy, but the distinction is not lost on us—or on Caddy, presumably.

The Waterhorse also inhabits lakes around the world. In North America, beginning in the 1800s, the Waterhorse was seen in Lake Champlain (from 1819) and in Lake Okanagan (from 1872). Okanagan's Ogopogo, which has a rich tradition in Native lore, was said to be hump-backed, and was sometimes said to have horns, a mane, or a beard. And of course, Ogopogo has a long neck, as do some of its "cousins" like Manipogo in Lake Winnipeg, Manitoba, and Igopogo in Lake Simcoe, Ontario. Champ of Lake Champlain is perhaps best known from the Mansi photograph (cover and case on pages 114–116), which clearly shows a long neck and head.

The Waterhorse also has a long history in Europe, Scandinavia in particular. Storsjoodjuret, Sweden's Great Lake Monster, is said to have lived in Storsjön, a deep mountain lake in central Sweden, for at least 360 years. Some 150 sightings by 450 people have been recorded since 1635. Storsjoodjuret has been described as anywhere from 11 to 45 feet long (juvenile to adult?), looking like an overturned boat, with a dog-like head, long neck, and a mane or ears on the side of the head.

Typical of nineteenth-century references to Lake Monsters in northern Europe is an article from the *Inverness Courier,* which was reprinted in the *The Times* of London in March 1856: "The appearance in one of the inland fresh water lakes [is] of an animal, which from its great size and dimensions has not a little puzzled our island naturalists. Some suppose him to be a description of the hitherto mythical water-kelpie, while others refer it to the minute descrip-

tions of the 'Sea Serpent,' which are revived from time to time in newspaper columns. It has been repeatedly seen within the last fortnight by crowds of people, many of whom have come from the remotest places of the parish to witness the uncommon spectacle."

The next year, in 1857, Lord James, the third Earl of Malmesbury, was told of a horse-like creature that lived in Loch Arkaig, Scotland. The Water-kelpie, as nineteenth-century chroniclers were discovering, was a real creature.

In terms of the history of Lake Monster sightings, especially the Waterhorse, none outshines that of the Loch Ness Monsters, which naturally issues from the Water-kelpie traditions. While the history of Nessie is well known (see pages 18–22), less well known are the remarkable encounters with Nessies that have taken place *on land*. These accounts provide a close-up view of the Waterhorse, unobscured by murky waters.

In 1771, someone spotted a monstrous creature "which was a cross between a horse and a camel" near Loch Ness. Children playing at Ness's Inchnacardoch Bay in 1912 told of seeing, from no more than a few yards' distance, an animal that looked like a long-necked camel. It entered the water, then disappeared into the waves. Two other land reports at Loch Ness, from 1923 and 1933, compared the creature to a giant hippopotamus.

Mike Dash, an investigator and author, has pointed out that one of the less-discussed topics about Loch Ness and Lake Monsters is the relatively modern occurrence of more than 20 land sightings at Loch Ness, and more than 30 other such eyewitness accounts elsewhere. Land sightings, for example, are also known for creatures seen in Seljordsvatnet in Norway and Storsjön in Sweden, as well as for several lakes in Ireland. Dash, an open-minded skeptic, feels that the paucity of land sightings since the thirties proves that the phenomenon of Nessie is more myth than monster. But a closer analysis of the data reveals that other factors may be at play.

In April 1932, Colonel L. McP Fordyce came forth and told how he and his fiancée were traveling near Loch Ness, from Kent to Aberdeen, when they saw an enormous animal come out of the woods and cross the road about 150 yards ahead of their car. "It had the gait of an elephant, but looked like a cross between a very large horse and a camel with a hump on its back and a small head and long neck. From the rear it looked grey and shaggy. Apart from scanning the national papers for some time in search of mention of the creature, we let the matter rest."

Further confirmation, in the form of other land sightings, would come quickly during the next several months. In August 1933, Mrs. M. F. MacLennan saw a dark-gray humped animal with short, thick legs, on the beach near Dores. It appeared to be about 18 to 23 feet (6 to 7.5 meters) long. In December 1933, Mrs. Ried near Inverfarigaig saw a creature resting onshore about the size of a hippopotamus, with a hairy body, a thick mane on its neck, a round, large head, and with thick, short legs.

Next came a classic sighting on par with the Spicers (see case, pages 99–101). On the brightly moonlit night of January 5, 1934, at about 1 A.M., a young medical student named Arthur Grant was riding his motorcycle along the loch road near Lochend when he saw a large, dark object on the road ahead. As he approached, the animal ran across the road, almost colliding with Grant. In the moonlight, he saw an animal with a small, eel-like head that had oval eyes, a bulky body with a broad tail, and four apparent legs ending in flippers. He estimated that it was about 18 to 20 feet long and had dark, whale-like skin.

"Knowing something of natural history I can say I have never seen anything in my life like the animal I saw," Grant was quoted as saying in Peter Costello's *In Search of Lake Monsters*. "It looked like a hybrid—a cross between a plesiosaur and a member of the seal family."

Before 1933, the record shows land sightings of the Waterhorse of Loch Ness in 1527, 1879, 1880, 1890, 1912, 1919, and 1923. This would be seven in 400 years. Some of the pre-1930s land sightings are spectacular, such as the 1880 Drumnadrochit encounter between E. H. Bright and a four-legged, long-necked, dark-gray monster that came out of a wooded area and went into the loch. Or the 1912 Inchnacardoch Bay encounter between William MacGruer and a yellowish, long-legged, camel-like beast that moved into the loch.

But most of the land sightings occurred in the 1930s—ten within two years, in fact. Why? As noted in our introduction, it happened just as the area was being deforested and the road around the loch was being upgraded. Views of the loch improved dramatically. Travel around the loch was easier. Media interest was at a peak. People were being forthcoming about what they were seeing—at least until the monster became a subject of ridicule both by the media and by scientists.

During the 1930s, Alec Muir saw a large beast cross the road in front of his car at Inverfarigaig, and a group of schoolchildren saw what one of them called a "horrifying" animal move from a swampy area to Urquhart Bay. Before the Spicer/Grant series of sightings, Mrs. Eleanor Price-Hughes told of seeing a large creature coming from the bushes with something pink (salmon?) in its mouth, and vanish into the water of the loch.

During February 1934, a month after Grant's sighting, Jean MacDonald and Patricia Harvey saw a thick-bodied creature that was more than six feet long crossing a stream near Inchnacardoch Bay in moonlight. It appeared to be dark above and lighter underneath, with four thick, short legs. In June 1934, Margaret Munro, at the shingle beach at Borlum Bay, sighted a large, dark-gray body with a giraffe-like neck and small head. It seemed to have two short forelegs or flippers.

Why isn't Nessie reported on land anymore? Has the population

of Nessies dwindled over the years, as some researchers believe? Or is there a human reluctance to report such a fantastic encounter?

In the end, as chemist and Nessie sympathizer Henry H. Bauer observes, "One is brought squarely up against the phenomenon of apparently responsible and plausible individuals who insist on the reality of experiences of the most extremely improbable sort."

CANDIDATE

The identity of the most widespread type of water monster, the Waterhorse, has been the subject of much debate for the past two centuries—one that continues to this day. Beginning in the mid-1800s and continuing through at least the 1970s, the most popular—but not necessarily the correct—explanation for the Waterhorse is that it is a surviving species of plesiosaur. Plesiosaurs have been described as looking like a snake threaded through the body of a turtle.

Plesiosaurs are widely referred to as "aquatic dinosaurs," though they were actually a type of reptile that lived in the oceans during the Mesozoic Era and supposedly died at the close of the Cretaceous Period along with the dinosaurs. But recent research from paleontologist Robert Bakker has shown that plesiosaurs did not, as once believed, live through the extinctions that punctuated the Age of Reptiles. Instead, the true plesiosaurs died out at the end of the Jurassic Period, not at the end of the Cretaceous, and similar reptiles quickly evolved to take over their ecological niche. A reptilian Waterhorse, therefore, would be a distant relative, at best, of the well-known plesiosaurs.

The best evidence suggestive of the existence of plesiosaurs in a lake comes from the 1972 images captured by an underwater camera in Urquhart Bay in Loch Ness. In August of that year, Robert Rines and his team from the Academy of Applied Science in Boston caught a 20- to 30-foot-long something both on sonar and on cam-

era (see case, pages 111–114). Two computer-enhanced images show a four- to six-foot-long diamond-shaped object with a median keel and a pointed tip attached to a larger body. This object looks very much like a rear flipper, but not the flipper of a seal, a whale, or any other aquatic mammal, nor the fin of an eel or a ray-finned fish. What it looks like is the rhomboidal-shaped flipper of a prehistoric plesiosaur. Though it could be what a flipper on an evolved pinniped would look like, too.

While in outward appearance the Waterhorse certainly *looks like* a plesiosaur, *is it* actually a plesiosaur? One obstacle to the Waterhorse-as-plesiosaur theory is the lack of verified plesiosaur fossils after the Cretaceous—a ghost lineage would have to exist. The other major obstacle is that the plesiosaur was a marine species. How could freshwater Waterhorses be plesiosaurs then?

Biologist Roy Mackal points out that some plesiosaur fossils have indeed been found in rivers and estuaries—conditions that imply a freshwater environment. Mackal speculates that while pursuing fish or escaping marine predators, plesiosaurs may have traveled up rivers and into lakes, thus echoing the Victorian notion of the "land-locked Sea Serpent," of course. With ample food and a lack of predators, plesiosaurs may have gradually been transformed into freshwater species.

Unlikely? It has happened before. There exist 43 species of elasmobranch—sharks and rays—in ten genera and four families, which have penetrated freshwater environments in Australia, Southeast Asia, western Africa, eastern South America, Central America, and southeastern parts of North America. This marine-to-freshwater transition is also represented among mammals. The seals of Lake Baikal in Siberia and five species of freshwater dolphins worldwide (Ganges River Dolphin, Indus River Dolphin, Amazon River Dolphin, Yangtze River Dolphin, La Plata Dolphin) serve as examples.

Common seals have been recovered from Loch Ness and Lake Champlain, so ocean-to-freshwater movement still occurs today.

The third major obstacle to the plesiosaur theory involves features reported by eyewitnesses but not exhibited by fossil plesiosaurs on record. These include hair, horns, dorsal humps, and the absence of a tail. Zoologist Karl Shuker, perhaps the strongest advocate for a plesiosaur explanation, argues that there are "perfectly reasonable explanations for the morphological differences between such creatures and fossil plesiosaurs." The "hair" and "whiskers" reportedly seen on Waterhorses, he suggests, may be soft-tissue sensory filaments that would leave no fossil traces, while the "horns" or "snorkels" could be breathing tubes. And the dorsal humps may not be undulations of the animals' bodies but either fatty tissue, inflatable air sacs, or exposed portions of a dorsal crest.

Despite holdouts to the notion that Waterhorses like the Loch Ness Monster are plesiosaurs, the general consensus today is that the whiskers, the mane, the hair, the wide mouth, the up-and-down swimming movements, and the cold-climate range all point to this animal being a *mammal*. The two mammal candidates most often discussed are the zeuglodon and the long-necked pinniped.

Zeuglodon is the most commonly used name for a group of long, serpent-like fossil whales. Much of the attention has been on *Basilosaurus,* an extinct genus of primitive whales of the family Basilosauridae (suborder Archaeoceti) found in Middle and Late Eocene deposits in North America and northern Africa (the Eocene Epoch lasted from 57.8 to 36.6 million years ago). Basilosaurus had a primitive dentition and skull architecture, and ranged from 55 to 75 feet long, with a skull 5 feet in length. The zeuglodon is the favorite candidate of several researchers, including Roy Mackal, Champ researcher Joseph Zarzynski, and Sea Serpent chronicler Gary Mangiacopra, who theorize that the animal may be responsible

for some modern reports of Lake Monsters and Sea Serpents. Mackal believes that the zeuglodon is the best fit for the reports of Lake Monsters in British Columbia's Lake Okanagan, Scotland's Loch Ness, and Vermont and New York's Lake Champlain.

But several characteristic traits of the Waterhorse, specifically its neck length, bulk of body, greasy trails, manes, beards, and visible hair, indicate a different mammalian candidate. In fact, the best fit given this description is a giant pinniped, or long-necked seal. Furthermore, the gender-related characteristics found in our two types of Waterhorse are just what would be expected of a pinniped.

Dutch zoologist Antoon Cornelis Oudemans first suggested the long-necked seal as an explanation for the Sea Serpent in 1892, christening his new pinniped *Megophias megophias.* Though there was no fossil evidence for such an animal in the paleontological record at the time, Oudemans decided that the existence of such an animal could equally explain sightings of long-necked animals, elongated animals with many humps, and some serpentine animals. Others would extend the long-necked-seal ideas into Loch Ness, most significantly Commander Rupert T. Gould, whose book on the Loch Ness Monsters was published right after the initial 1933 sightings. In the 1930s, Oudemans also became interested in the Loch Ness Monsters, which he identified as a lake form of his *Megophias.* And finally, in the 1960s, Bernard Heuvelmans maintained that his Merhorse, or "maned serpent," best illustrated by the many sightings of the whiskered and maned Sea Serpents of the nineteenth and twentieth centuries, was an elongated pinniped, a big, long-necked seal, if you will. Finally, as mentioned earlier, Peter Costello and Loren Coleman, among others, then carried the water bucket for the long-necked seal or pinniped into the 1970s and beyond.

In 1996, paleontologist Darren Naish put forth a possible fossil candidate that might fit the Waterhorse—the long-necked Pliocene

pinniped *Acrophoca longirostris*. First described in 1981, *Acrophoca* was a fast-swimming marine seal from the Pisco Formation of Peru, South America, according to Naish, that had "an elongate, slim skull, an elongate neck and has been described as being serpentiform in shape. A new, currently undescribed fossil species of *Acrophoca* is even longer-skulled."

TYPE:
WATERHORSE

CATEGORY: Long Neck

Descriptive Incident:
DATE: December 7, 1905
LOCATION: Off Parahiba, Brazil.
WITNESSES: E. G. B. Meade-Waldo and Michael J. Nicoll

FOR THE THIRD YEAR RUNNING, THE EARL OF CRAWford, Lord Lindsay, a man of some scientific renown (he had been president of the Royal Astronomical Society from 1878 to 1879), had equipped the *Valhalla*, his large auxiliary yacht of 1,700 tons, as

an oceanographic research vessel. On this 1905 voyage were several scientists, including two Fellows of the Zoological Society, expedition naturalist E. G. B. Meade-Waldo and expedition entomologist Michael J. Nicoll.

On December 7th, at about 10:15 A.M., the *Valhalla* was cruising along at 14 knots in the Atlantic off the coast 15 miles east of the mouth of the Parahiba River, when Nicoll drew Meade-Waldo's attention to an unusual shape in the ocean, about 100 yards away.

"Is that the fin of a great fish?" Nicoll asked Meade-Waldo.

Recording the events in his journal, Meade-Waldo wrote: "I looked and immediately saw a large fin or frill sticking out of the water, dark seaweed in colour, somewhat crinkled at the edge. It was apparently about 6 feet in length and projected from 18 inches to 2 feet from the water."

As Meade-Waldo reached for his powerful binoculars, "a great head and neck rose out of the water in front of the frill; the neck did not touch the frill in the water, but came out of the water in *front* of it, at a distance of certainly not less than 18 inches, probably more. The neck appeared about the thickness of a slight man's body, and from 7 to 8 feet was out of the water; head and neck were all about the same thickness."

Meade-Waldo clearly saw that the head was "turtle-like." He plainly viewed the line of the mouth, which only came around a little way, not past the eyes, which were also visible. The head and neck moved back and forth in a "peculiar manner," he reported. The color of the head and neck was dark brown above and whitish below, indeed, "almost white," or "dirty white."

Nicoll and Meade-Waldo were speechless.

Like Meade-Waldo, Nicoll also wrote of the encounter in the *Proceedings of the Zoological Society of London,* as well as in his 1908 book, *Three Voyages of a Naturalist.* Nicoll's description confirms Meade-Waldo's, differences being only a matter of degree, such as

the under color being "silver-white" instead of "almost white." Nicoll also said the "fin" looked like "a gigantic piece of ribbon seaweed." Additionally, he noted that they had watched it together for several minutes but that their fast-traveling yacht had overtaken it. During the 14 hours after their sighting, they "went about" twice, and at about 2 A.M., the first and third mates reported a great commotion in the water, about 100–150 yards off the port side. It appeared that the creature was going faster than the yacht at that point, which was sailing at 8½ knots. The officers of the watch thought it reminded them of a submarine going just below the surface. They viewed it for several minutes, but could not get a clear look at it, then noticed it "sounded" off the port bow and vanished.

In 1929, Commander Rupert T. Gould reinterviewed Meade-Waldo via correspondence, providing a few additional details. The naturalist recalled that the "frill at the back of the head and along the back crinkled at the edge." The neck made a good wave, and Meade-Waldo noticed "*under* [his emphasis] water behind the neck I could see a good-sized body."

But it was Nicoll who most concisely put forth some notion of what he saw. "This creature was an example, I consider, of what has so often been reported, for want of a better name, as the 'great sea serpent.' I feel sure, however, that it was not a reptile that we saw, but a mammal. It is, of course, impossible to be certain of this, but the general appearance of the creature, especially the soft, almost rubber-like fin, gave one this impression," Nicoll wrote in the *Proceedings of the Zoological Society of London*. Both witnesses said that the line of the mouth did not go beyond the eyes, a clear indication to them that this was a mammal, not a reptile.

Other encounters were reported nearby in the days and months to follow. On December 10, 1905, the *Happy Warrior*, a merchant sailing ship, logged an encounter with a "sea snake of great magnitude" that appeared off their port bow, and that looked to be several

lengths of the ship. They saw that it had a long neck and that it traveled at an estimated speed of six knots, before it sounded a few minutes later. The *Happy Warrior* was cruising 80 miles from where people aboard the *Valhalla* had sighted their "Sea Serpent." Furthermore, within months, in 1906, Captain J. Koopman, an officer on a merchant vessel steaming 40 miles off the coast of Brazil, about 60 miles south of the Meade-Waldo/Nicoll sighting, saw a "Sea Serpent." From more than 300 feet away, Koopman said it appeared to be almost 200 feet long, with a "monstrous head" and "enormous dorsal fins."

The level of detail and the credibility and credentials of the *Valhalla* eyewitnesses involved make the Meade-Waldo/Nicoll sighting one of the best on record. "It is safe to say," wrote Gould in *The Case for the Sea-Serpent* in 1930, "that it is generally recognized, even by those who are profoundly skeptical of other sea serpent stories, as a piece of evidence which cannot be disregarded—and yet which cannot be explained by supposing that any known creature was seen." In 1996, science writer Matthew Bille noted: "Their report stands as irrefutable if incomplete evidence that the oceans hold at least one spectacular creature still evading the probes of science." And in 2001, cryptozoology skeptic and British paleontologist Darren Naish talked of the *Valhalla* sighting as "one of the best sea serpent accounts of all time." He is "inclined to accept it and similar sightings as among the most compelling of aquatic cryptid accounts."

Sources: Matthew Bille, "The Definite Sea Serpent," *Strange Magazine* website, 1996; Rupert T. Gould, "Yacht 'Valhalla,'" Chapter IX in *The Case for the Sea Serpent* (London: Phillip Allan, 1930), pp. 195–203; Bernard Heuvelmans, *In the Wake of the Sea-Serpents* (New York: Hill and Wang, 1968), pp. 372–74; Paul LeBlond, "A Previously Unreported 'Sea Serpent' Sighting in the South Atlantic," *Cryptozoology*, 2, 1983, pp.

82–84; E. G. B. Meade-Waldo and Michael J. Nicoll, "Description of an Unknown Animal Seen at Sea off the Coast of Brazil," *Proceedings of the Zoological Society of London*, vol. 2, June 19, 1906, pp. 719–21; Darren Naish, "Sea Serpents, Seals and Coelacanths," *Fortean Studies*, Vol. 2001, pp. 76–77; Michael J. Nicoll, *Three Voyages of a Naturalist* (London: Witherby & Co., 1908), pp. 21–26.

5

TYPE:
WATERHORSE

CATEGORY: Merhorse

Descriptive Incident:
DATE: August 30, 1913
LOCATION: Off the Grand Banks, Newfoundland, Canada
WITNESSES: G. Batchelor and Mr. Ayres

THE HMS *CORINTHIAN* WAS AN ATTRACTIVE, COAL-burning passenger ship to which guns had been fitted. Patrolling the Grand Banks of Newfoundland that day in the summer of 1913, officer of the watch G. Batchelor was looking around at 4:30 A.M. during a change in shifts.

What second officer Batchelor saw, about a mile away straight ahead, startled him. At first, he thought it might be a stranded fishing boat, but then it "suddenly disappeared beneath the surface," and "something surprising showed itself about two hundred feet away from the ship," he recalled when later penning his description for a British newspaper.

> *First appeared a great head, long fin-like ears and great blue eyes. The eyes were mild and liquid, with no indication of ferocity. Following said eyes came a neck; it was a regular neck all right, all of twenty feet in length, which greatly resembled a giraffe. The monster took its time in emerging so long that I wondered what the end would be. The neck . . . seemed to be set on a ball bearing, so supple was it and so rhythmically did it sway while the large liquid blue eyes took in the ship with a surprised, injured and fearful stare. The creature was well fixed for side arms. Three horny fins surmounted its bony head. . . . The body was about the same size as the neck very much like a monster seal or sea lion with short water-smoothed fur. The tail was split into two fins. Its color scheme was good, although some might think it giddy; light brownish yellow tastefully spattered with spots of a darker hue. For a minute the creature inspected the Corinthian with its roving gaze, and then it disappeared, showing its after-works as it dived.*

Batchelor, like many witnesses before and after him, was caught off guard by the encounter. "Down in my room I had a camera and a rifle," he wrote less than a month later. "Yet I was the only one on the bridge besides the quarter master [Mr. Ayres] at the wheel. I don't mind confessing that I wavered between my duty and desire for some sort of shot. Finally I stayed, but I don't know whether I should take full credit for that or not because I hated to lose sight of

the thing. As it watched me it churned the water into foam and spray with its huge front fins. As it went out of sight it emitted a piercing wail like that of a baby. Its voice was altogether out of proportion to its size."

Batchelor's drawing, which appeared with his account, is well known in the Sea Serpent literature and is labeled a Sea-Giraffe. The ears and eyes in his sketch are not as large as indicated in his written account, and other parts of the illustration therefore may be dramatized. Some have viewed the "fins" on the head as a stylized mane. The drawing shows the "hybridized" features of a rather more stocky neck than on most long-necked Waterhorses, but with a full array of hair and seemingly male features.

A hoax? Unlikely. This ship had very serious business to perform. The HMS *Corinthian* would continue to ply the waters of the central Atlantic during both World Wars. Records show that the ship was single-handedly responsible for rescuing 821 survivors from the *Duchess of Atholl,* which was torpedoed by a German U-boat on October 10, 1942, and another 1,477 survivors from the *Empress of Canada,* likewise hit on March 13, 1943.

Sources: G. Batchelor, "Sea Monster's Bonny Blue Eyes," *Daily Sketch,* London, September 25, 1913, p. 6; G. Batchelor, personal correspondence to Dr. Oudemans, December 7 and 12, 1913, cited in Heuvelmans, 1968.

TYPE:
WATERHORSE

CATEGORY: Long Neck

Descriptive Incident:
DATE: May 22, 1917
LOCATION: South of Iceland
WITNESSES: Captain F. W. Dean and crew

BEFORE AND DURING THE FIRST WORLD WAR, ARMED merchant cruisers plowed the blockade from the Scottish coast to the Arctic ice line. With a keen eye to the horizon, and on the lookout for enemy submarines, the crew of the *Hilary* would have a remarkable encounter.

While sailing south of Iceland at about 9 A.M. on a crisp, sunny morning, Royal Navy Commander Captain F. W. Dean was called to the bridge and told that there was an object on the starboard quarter. "Was it a periscope?" Dean quickly asked. "Where is it?"

It's not a periscope, he was told, but a living thing, though not a whale. When it was pointed out to him, Dean thought it looked like a tree trunk with "knobby ends" on it. Through binoculars, he discovered that those "knobby" things were the head and dorsal fin of a living animal.

Commander Dean, writing of this experience in 1920, said that his crew never missed the chance to "do a bit of anti-submarine practice" in those days. So they swung the three 6-pounder guns as well as the ship's heavier guns into place. But before the *Hilary* fired on the "stranger as target," Dean decided to try to take a closer look at the creature.

"The head was about the shape of, but somewhat larger than that of, a cow," he wrote, "though with no observable protrusions such as horns or ears, and was black, except for the front of the face, which could be clearly seen to have a strip of whitish flesh, very like a cow has, between its nostrils."

As the head rose three times to look at the ship, the black, four-foot-high dorsal fin looked thin and flabby—"the upper part turned over sometimes like the top of a terrier's ear when cocked." The navigator thought that the creature's neck was not less than 15 feet long, while Captain Dean thought it was 20. Years later, when questioned, Dean would confirm that this was not a basking shark, of which he had seen a 30-footer in the Irish Channel, nor was it a large whale.

As the ship approached to within 1,200 yards, they fired three 5-round shots at the creature. While the first two rounds failed to disturb it, the third order of five rounds did some damage, with the second shot making a clean hit. The animal caused a "furious commotion," and a few seconds later all was quiet. The creature had disappeared.

The officer of the watch was very worried about the incident, and he requested that the encounter not be placed in the ship's log. Officer Harris told him, "Nonsense, of course, I must log the matter as the captain has ordered."

"Well, that makes it a certainty anyhow," said the officer of the watch, believing that it was bad luck to kill the creature. "We shall never reach port again."

Three days later, the *Hilary* was sunk by a German submarine not far from the place where they had used a long-necked Sea Monster for target practice. The captain and most of his crew were rescued before the ship sank. The officer of the watch had packed all his possessions.

Source: Rupert T. Gould, "H.M.S. 'Hilary,'" Chapter X, *The Case for the Sea-Serpent* (London: Philip Allan, 1930), pp. 204–16.

TYPE:
WATERHORSE

CATEGORY: Merhorse

Descriptive Incident:
DATE: September 1920
LOCATION: Mosquito Harbor, San Clemente Island, California
WITNESS: Ralph Bandini

FOR SEVERAL YEARS AT THE BEGINNING OF THE TWENTIETH CENTURY, the creature known as the San Clemente Monster was anything but shy. It frequented the waters between Santa Catalina

Island and San Clemente Island—some of the most heavily sport-fished waters of America—a mere 50 miles south of Los Angeles. The San Clemente Monster was reported so often between 1914 and 1919 that it captured the attention of game fishermen along the southern California coast.

One of those who decided to look into the matter was Ralph Bandini, one of the greatest fishermen of all time; in 1919, he was the secretary of the Tuna Club, the finest of all American big-game fishing clubs. Bandini was a lawyer, and, as a member of the state's fish and game commission, he championed conservation of California's coastal resources. Bandini, who died in 1961, left his most enduring legacy to the sport of big-game fishing in his writings, in particular his three books entitled *Tight Lines*, *Veiled Horizons*, and *Men, Fish, and Tackle*. It was in his first book, *Tight Lines*, privately published in 1932, that he told of his own personal encounter with the San Clemente Monster.

Bandini first saw the Monster in 1919, though only briefly, while he was ten miles off Catalina Island, California. He was out fishing with his crew when one of his crewmen, Percy Neal, shouted: "Look! Look! Over there!" About a mile away, they could see something rising higher and higher in the water. Bandini was convinced that this was the Monster, but not until September 1920 would Bandini have a close encounter that allowed him to be certain of what he saw. It happened at about eight in the morning while he was about a mile west of Mosquito Harbor, San Clemente Island, in his power cruiser with his famed fishing buddy, Smith Warren. Wrote Bandini:

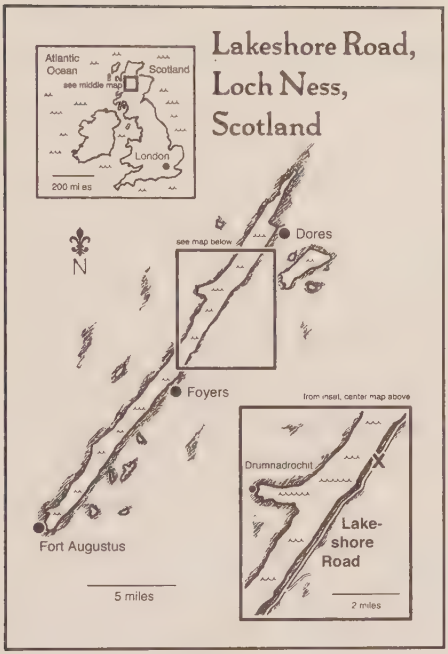
> *All of a sudden, I saw something dark and big heave up. I seized my glasses. What I saw brought me straight up! A great columnar neck and head, I guess that is what it was, lifting a good 10 feet. It must have been five or six feet thick. Something that appeared to be a kind of mane of coarse hair, almost like*

a fine seaweed, hung dankly. But the eyes—those were what held me. Huge, seemingly bulging, round—at least a foot in diameter! We swung around it. . . . Then, even as I watched through the glasses, the Thing sank. There was no swirl, no fuss. . . . Just a leisurely, majestic sinking—and it disappeared, about a quarter of a mile away.

Bandini thought it was bigger than the biggest whale. In the years that followed, Bandini would see the creature twice more, but never again so close.

Others would see it, too. George Farnsworth, the president of the Tuna Club, described it in *The History of the Tuna Club* (1948), talking of the eyes that were a foot across and a mane of hair about two feet long. Others who saw it and gave similar descriptions of the creature included millionaire George C. Thomas III, ex–Tuna Club president Jimmy Jump, deep-sea fishing expert and inventor of the Coxe reel Joe Coxe, and author of many technical fishing books J. Charles Davis II. Each said they saw it in the same general location, the Outer Santa Barbara Channel between San Clemente and Santa Catalina islands.

Sources: Bernard Heuvelmans, *In the Wake of the Sea-Serpents* (New York: Hill and Wang, 1968), pp. 478–81, quoting directly from Ralph Bandini, "Mysteries of the Deep," *Tight Lines,* privately published, 1932; International Game Fish Association Hall of Fame, "Ralph Bandini," IGFA.org biographical Inductee information, 1999.



TYPE:

WATERHORSE

CATEGORY: Long Neck

Descriptive Incident:

DATE: July 22, 1933

LOCATION: Loch Ness, Scotland

WITNESSES: Mr. and Mrs. George Spicer

RETURNING FROM A VACATION IN NORTHERN SCOTLAND, the Spicers were driving south from Inverness along Lakeshore Road at about 3:30 to 4:00 in the afternoon. The matter-of-fact, down-to-earth London banker and his wife had passed through Dores and were on their way to Foyers. The weather was clear and visibility good. Suddenly, as the car came up a slight incline, the bushes about 200 yards ahead became agitated, and out emerged an enormous animal, which crossed the small road, from left to right, in front of them. Startled, Spicer first braked then quickly accelerated instead, nearly striking the huge, dark, long-necked creature in the process. The animal shuffled jerkily across the road, slipped through the underbrush, and seemed to vanish into the loch.

George Spicer was so upset by the encounter that he immediately penned a letter to the *Courier*. George described what they saw

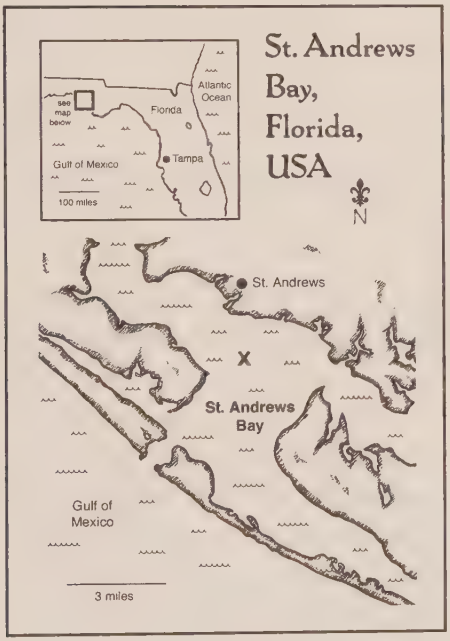
as a "terrible dark elephant grey, of loathsome texture, reminiscent of a snail." Furthermore, Spicer said, it had "a long neck which moved up and down in the manner of a scenic railway, and the body was fairly big, with a high back; but if there were any feet they must have been of the web kind, and as for a tail I cannot say, as it moved so rapidly, and when we got to the spot it had probably disappeared into the loch." He also noted that the "dragon or prehistoric animal" appeared to be "carrying a small lamb or animal of some kind."

The most controversial line in the letter dealt with the creature's size: "Length six feet to eight feet and very ugly." Various researchers and critics have been quick to note that Spicer changed the creature's length in his retellings of the story. But it's easy to see why. In the first letter, which was written in haste, Spicer did indeed write that the creature was six to eight feet in length. But later, while rethinking what he saw, how the creature had filled the 10- to 12-foot-wide road, Spicer told Nessie author Constance Whyte that it was "the same length as the road is wide" and he told author Rupert T. Gould that it was probably at least 25 feet in length. Of course, in its earliest edition, *The Sunday Times* of London made things even worse with a typo; they had the length at 300 feet! This was changed to 30 feet in later editions.

In the 1990s' BBC program *X-Creatures*, British skeptic Adrian Shine revealed that he thought what the Spicers had seen was just an otter hopping across the road, distorted by heat waves. But even the largest male otter known makes a poor fit for Spicer's creature, and the mild weather at the time makes "heat waves" a rather unlikely explanation.

Sources: Roland Binns, *The Loch Ness Mystery Solved* (Buffalo, NY: Prometheus, 1984); Peter Costello, *In Search of Lake Monsters* (New York: Coward, McCann & Geoghegan, 1974); Rupert T. Gould, *The*

Loch Ness Monster and Others (London: Geoffrey Bles, 1934); Constance Whyte, *More Than a Legend: The Story of the Loch Ness Monster* (London: Hamish Hamilton, 1957).



TYPE:

WATERHORSE

CATEGORY: Merhorse (juvenile)

Descriptive Incident:

DATE: March 1943

LOCATION: St. Andrews Bay, Florida

WITNESSES: Thomas and Dorothy Helm

DURING THE ATTACK ON PEARL HARBOR, THOMAS Helm's left knee and left hand were blown apart by a Japanese Zero's machine gun. After receiving a citation for shooting down another Zero with his Springfield rifle, Helm was released from the navy, and by 1943, was working as a radio newscaster in Panama City, Florida, where he lived with his wife, Dorothy. An avid out-

doorsman all his life, Helm would sail with his wife into the Gulf of Mexico on their days off. In March of 1943, while they were sailing in St. Andrew's Bay, they encountered an animal that would befuddle Helm for years and lead him to undertake a study of these creatures. In 1962, he wrote a book, *Monsters of the Deep,* where he recounts his sighting.

He and his wife were out in their 16-foot yacht, sailing along the northwest coast of Florida. At four in the afternoon, on a calm and clear day, they saw what he at first took to be an otter. It was swimming straight toward his boat. "The creature had a head the size of a basketball on a neck which reached four feet out of the water," wrote Helm. "Staring for a brief moment in total disbelief, I quickly turned to attract Dorothy's attention but immediately saw that she too saw the swimming creature."

Helm was startled, but he kept watching the creature, which was now 30 or so yards ahead of the boat. It turned its head directly to them. Recalled Helm:

> *It was unmistakably some kind of animal. The entire head and neck were covered with wet fur, which lay close to the body and glistened in the afternoon sunlight. When it was almost beside our boat the head turned and looked squarely at us. My first thought was that we were seeing some kind of giant otter or seal, but I was immediately impressed by the fact that this was not the face of an otter or seal. . . . The head of this creature, with the exception that there was no evidence of ears, was that of a monstrous cat. The face was fur-covered and flat and the eyes were set in the front of the head. The color of the wet fur was uniformly a rich chocolate brown. The well-defined eyes were round and about the size of a silver dollar and were glistening black. There was evidence of a flattened black nose and*

just below, where I judged the mouth should be, was a mustache of stiff black hairs with a downward curve on each side.

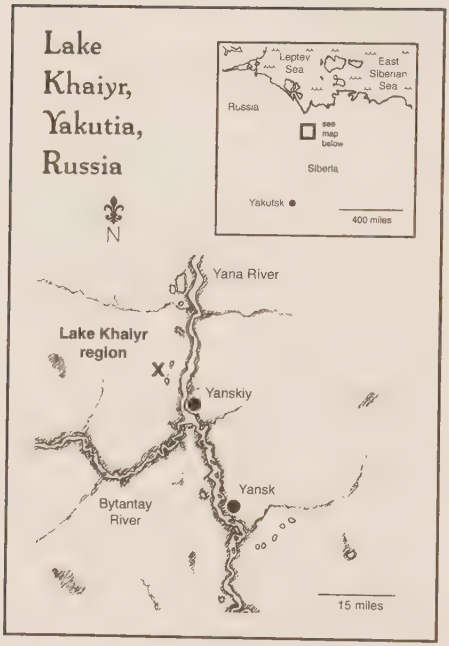
The creature looked casually at them, turned away, and then in a double take, snapped around and looked at them again before the head and neck disappeared beneath the water. An instant later, a large commotion in the ocean indicated that a large body was sounding, and the creature was gone. Helm and his wife searched and searched, but they could not find it again.

Pondering what he saw, Helm thought that people would have been more willing to believe him had he seen a "dragonlike" Sea Serpent. But he had seen a "catlike head as large as that of a Bengal tiger," which to him seemed just incredible.

Helm could not understand why, if this was indeed a pinniped, as its fur and facial features suggested, it did not fit with what he knew about them; what he saw had an uncharacteristic long neck and large head. Being unfamiliar with the historical Sea Serpent literature, Helm was confused about what he saw: "Seals and sea lions have long pointed noses and the eyes are set on the sides of the head like those of a squirrel or rat. The creature my wife and I saw had eyes which were positioned near the front of the face like those of a cat."

In discussing the incident, Bernard Heuvelmans was reminded of several similar descriptions and wrote in his *In the Wake of the Sea-Serpents* that it sounded very much like a young specimen of the maned Merhorse.

Source: Thomas Helm, *Monsters of the Deep* (New York: Dodd, Mead & Co., 1962), pp. 162–71.



TYPE:
WATERHORSE

CATEGORY: Long Neck

Descriptive Incident:
DATE: Mid-1964
LOCATION: Lake Khaiyr, Sakha Republic, Siberia
WITNESSES: Nikolai Gladkikh, expedition members

IN JULY OF 1953, ACCORDING TO THE RUSSIAN SCIENTIFIC journal *Priroda (Nature)*, Soviet geologist V. A. Tverdonkhlebov and his associate Boris Bashkatov saw a long-necked animal more than 30 feet long in Lake Vorota. There were also rumors of a monster that would carry off dogs in Vorota's twin lake of Labynkyr. Such reports appeared to stimulate Soviet interest in Lake Monsters.

Then, in 1964, an expedition of scientists from Moscow University made the arduous journey over swamp tundra to reach Lake Khaiyr, located about 500 miles northwest of Labynkyr and 100 miles from the shore of the Laptev Sea. Lake Khaiyr is a thermal lake, kept warm longer than surrounding lakes by active geological tectonics. The deputy chief of the expedition, geologist G. Rukosuyev, reported that halfway through the 1964 survey, Nikolai F.

Gladkikh, a biologist with the group, unexpectedly came across the Monster of Lake Khaiyr.

"He had gone down to the lake to collect water, early one morning," wrote Rukosuyev, "and there beheld this creature, which had climbed out on to the bank, and seemed to be browsing on the grass." Gladkikh told Rukosuyev that "it had a small head on a long skinny neck, an enormous body with bluish-black skin, and an upright dorsal fin."

A frightened Gladkikh then ran back to awaken the head of the biology group. Unfortunately, by the time the other members of the expedition rushed to the shore with cameras and rifles, the animal had disappeared. They found crushed and trampled grass, however, though no actual evidence that the grass had been eaten. Back at the base camp, Gladkikh hurriedly made a sketch, which showed a large dinosaur-like, four-limbed, long-necked beast coming out of the water.

Later, other members of the expedition, including the leader and two members of the biology group, had sightings. Rukosuyev reported: "They were looking across the lake when suddenly the head appeared out in the middle of the expanse of water, and then the dorsal fin. The Monster was lashing the water with its long tail and sending out waves all over the lake."

The scientists could not identify the creature. "At present," Rukosuyev wrote, "no one can say what type of animal this is—maybe it is one as yet unknown to science. Perhaps the last of the long extinct Ichthiosauri? I don't know. I am only a geologist."

Source: Tim Dinsdale, *The Leviathans* (London: Routledge & Kegan Paul, 1966), pp. 36–38, quoting directly from G. Rukosuyev, "The Mystery of Lake Khaiyr," *Soviet Life,* June 1965, p. 41.

TYPE:

WATERHORSE

CATEGORY: Long Neck

Descriptive Incident:

DATE: August 1968

LOCATION: Okanagan Lake, British Columbia, Canada

WITNESSES: Art Folden and family

THE FOLDEN FAMILY WAS TRAVELING ON HIGHWAY 97 just south of Peachland in the late afternoon, when Art Folden spotted something odd moving near the shore of the lake, which was otherwise glassy calm. Folden, a sawmill worker, stopped the car, grabbed his 8mm camera from the backseat, and started filming from a bluff overlooking the lake. As he and his wife and children viewed the object some 300 yards offshore, Folden joked with his wife that it was Ogopogo; she thought it was just a bunch of ducks.

Folden was aware that he had very little film left in his cameras, so he stopped the camera each time the animal submerged and began filming again when it resurfaced. The short footage shows a large creature diving and reappearing, until it finally takes off, churning up waves and leaving a heavy wake, before making its last dive.

Based on the size of pine trees onshore, about 25 feet tall, the creature was estimated to be about 60 to 70 feet long.

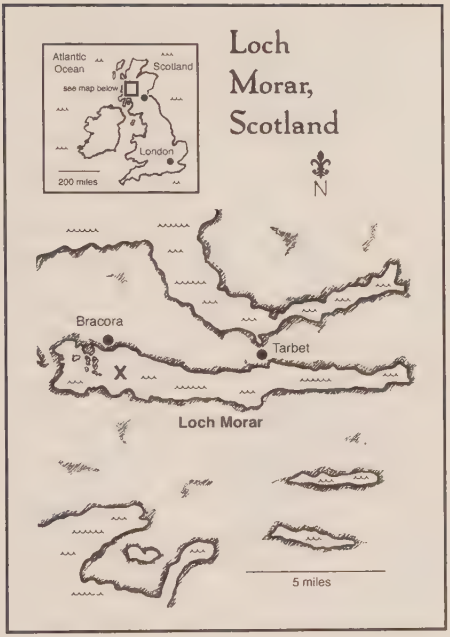
Fearing ridicule, Folden didn't show the film outside his family, until two years later when his brother-in-law convinced him that others might be interested in it. But the reception was decidedly mixed. Some thought it was a log or a wave, though the mayor of Kelowna, the manager of the chamber of commerce, and an *Outdoors Weekly* columnist were all apparently convinced that the object was indeed Ogopogo.

A frame-by-frame examination of the Folden film by Kerry Voth in 2000 revealed some surprising details. A threshold increase analysis showed that the creature was a solid object rather than a shadow effect. A large portion of it is actually out of the water showing humps and a dark-green color with brown running along what appears to be the spine of its back. The object exhibits three protrusions, one to each side, and a third upward. An enlarged-frame version seems to show a creature with a reptilian head, front appendage, and long tail that bears a striking resemblance to the creature imaged in Loch Ness by Robert Rines in 1972 and 1975 (see pages 111–114). Says Ogopogo investigator Arlene Gaal, "The potential this film holds in unlocking the mystery of Lake Monsters world-wide has never really been appreciated by the scientific community."

Stories of a large serpent-like creature living in Okanagan Lake, a relatively narrow 69-mile-long waterway in southern British Columbia, date back to the region's Indians, who called it Naitaka, or "The Lake Demon." Settlers have called it Ogopogo since about 1924. Thousands of sightings have taken place in the past century, numerous photographs have been taken, and at least a half dozen films have captured the alleged Ogopogo, Folden's being the first. Many teams have searched for the animal, with some coming from

as far away as Japan, using sonic-detection devices, underwater cameras and divers, helicopters, and even a one-person submarine. Sightings continue, and local businessmen have posted a reward of $2 million (Canadian) for scientific evidence of the Ogopogo's existence.

Sources: Arlene Gaal, *In Search of Ogopogo* (Blaine, WA: Hancock House, 2001); Arlene Gaal, *Beneath the Depths* (Kelowna: Valley Review, 1976).



TYPE:

WATERHORSE

CATEGORY: Long Neck

Descriptive Incident:

DATE: August 16, 1969

LOCATION: Loch Morar, Scotland

WITNESSES: Duncan McDonnell, William Simpson

LOCH MORAR, 70 MILES SOUTHWEST OF LOCH NESS, the deepest lake in the British Isles at more than 1,000 feet deep, is only a quarter mile from the ocean and has much clearer waters than Loch Ness. For centuries, Morar has been the home of the Gaelic monster *a-Mhorag*. The creature, called either Morag or Maggie today, is second only to Nessie in fame in the United Kingdom.

In the 1930s, during Nessie's first celebrated span of popularity, Morag was seen frequently and was generally described as a rapid-moving, hump-backed creature, about 30 feet in length, with a long neck. The lake has been home to more than 30 credible sightings between 1887 and 1970, according to the Loch Morar Survey, a group of biologists devoted to searching for the monster.

Morag shows a unique aggressiveness toward fishermen. In one of the most dramatic examples of this behavior in recent times,

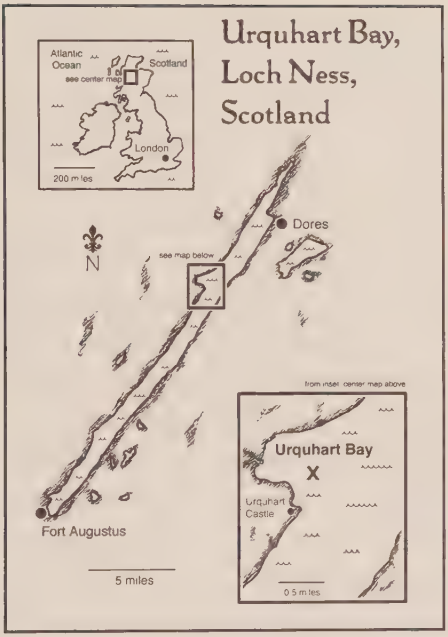
Morag is credited with causing a terrifying encounter on August 16, 1969. Two friends, Bill Simpson and Duncan McDonnell, were out fishing on the loch in their motorboat, when they decided to head home at about 9 P.M., when highland twilight still made for plenty of visibility. As they neared their cabin, they heard a splashing behind them. Turning to look at what was happening, McDonnell saw a creature heading right for their boat, at a speed of 20 to 30 knots. The beast hit the boat, and McDonnell immediately grabbed an oar and attempted to fend off the large animal, fearing the boat might capsize if the creature got under it. Meanwhile, Simpson rushed into the cabin, grabbed a rifle, and fired at the thing, to no apparent effect. The animal turned and sank into the water. Five minutes and it was all over.

Simpson and McDonnell described the creature as 25 to 30 feet long, with a rough, dirty brown skin, three large black humps, and a snake-like head that measured a foot across.

The incident prompted some members of the Loch Ness Investigation Bureau to investigate, in 1970, the possibility of a creature in Loch Morar. One member, Neil Bass, spotted a "hump-shaped black object" during their observations on the loch. Bass, who headed the survey at Morar, held a news conference at the London Zoo. He introduced the media to retired Navy Captain Metcalf and his wife, Dora, who lived by the loch from 1966 to 1969, and who had often seen giant, 40-foot-long, otter-like animals swimming by their verandah.

Unlike Loch Ness, Morar is quite remote and lacks a roadway along its circumference, presenting few opportunities for observing its mysterious inhabitants.

Sources: Elizabeth Montgomery Campbell and David Solomon, *The Search for Morag* (London: Walker and Co., 1973); Clare Dover, "Couple Tell of Morag, the New Loch Monster," *London Daily Telegraph*, November 29, 1970.



TYPE:

WATERHORSE

CATEGORY: Long neck

Descriptive Incident:

DATE: August 8, 1972

LOCATION: Urquhart Bay, Loch Ness, Scotland

WITNESSES: Robert Rines, sonar tracks and simultaneous photographs

COULD MODERN TECHNOLOGY BE APPLIED TO SOLVE the mystery of the Loch Ness Monster? Robert Rines, a lawyer trained in physics, thought so as far back as 1970, and two years later, he organized a complex investigation into Nessie using, for the first time, a combination of sonar and underwater photography.

In the early morning hours of August 8, 1972, Rines and his team from the New England–based Academy of Applied Science, a nonprofit group dedicated to fostering invention in America, were aboard the research vessel *Narwhal* in Urquhart Bay. The vessel was moored approximately 60 yards from the shore near Temple Pier when their sonar picked up two large unidentified targets underwater. The sonar chart shows thin oblique traces typical of fish a foot or two in length and two thick traces from much larger objects, giving the impression of small fish fleeing from large predators.

At the same time, Rines's underwater camera, which was equipped

with a strobe light, was exposing film every 45 seconds or so in the same direction as the sonar beam. Back in the U.S., the 16mm film, which was processed under control of Eastman Kodak, yielded several remarkable photos. Two frames, which were subsequently enhanced by the Jet Propulsion Laboratory in California, show the outline of a fin or flipper attached to a body. These do not match the appendage of any known aquatic animals in the loch, or for that matter, anything known today. Since the axis of the flipper changes from one frame to the other, the two frames suggest that either the flipper moved between the frames, or perhaps one was a front limb and the other was a hind limb.

With the simultaneous sonar track giving a measure of how distant these objects were, the flipper-like shape was estimated to be 6 to 8 feet long and 2 to 4 feet wide. Subsequent frames show clear water again. Whatever it was had left the area.

Certainly something remarkable was captured on film. One longtime Nessie observer, Henry Bauer, author of *The Enigma of Loch Ness*, commented, "Monster indeed!"

The photos caused a sensation until critics stepped in claiming that these photos had been retouched. In fact, the medial "spine" and outline of the flippers are quite visible in prints from the original transparencies—prior to enhancement by JPL scientist Alan Gillespie, who stated: "Something unusual was in the image, and it was not an artifact of processing, and it had flippers of some sort."

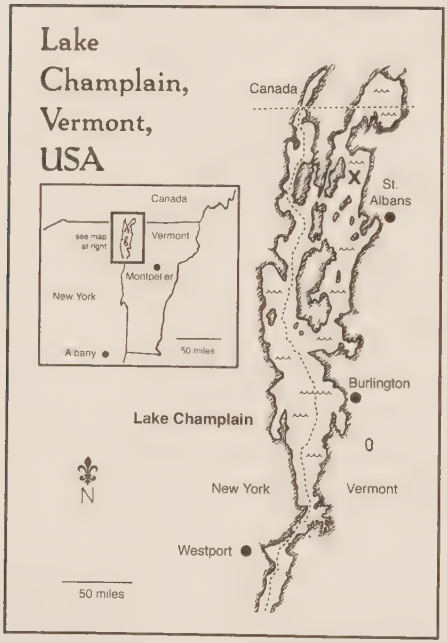
Three years later, on June 20, 1975, Rines and his Academy team, which included Charles Wyckoff, a photographic scientist with much experience in underwater photography, returned to the loch and obtained two more astonishing photographs, but without simultaneous sonar contact this time. One showed what looked to some to be a gargoyle-like head with two small horns but to others looked like either a tree stump, an engine block with an exhaust pipe, or a pile of rock strewn on the sandy bottom.

More remarkable is a second image, of what appears to be the upper torso, two appendages, neck, and head of a living creature in murky water. The head and neck was estimated to be about 7 feet long. The photographs, which were published in *Technology Review*, led reputable scientists such as Harold "Doc" Edgerton, the legendary MIT scientist who had invented side scan sonar and strobe photography, and Sir Peter Scott, one of Britain's most respected naturalists, to endorse Nessie's existence. Even the scientific journal *Nature* published an article about the underwater photos and sonar charts from 1972 and 1975 and the official naming of Nessie as *Nessiteras rhombopteryx*—meaning "Ness Monster with a Diamond Fin." But criticisms of the photographs, including the fact that a portion of what appears to be the neck near the animal's head in the 1975 "plesiosaur photograph" was not visible, soon overturned the initial enthusiasm, with the Natural History Museum of London concluding that the creature did not exist.

Yet the simultaneous sonar and photographic evidence obtained in 1972 seem to establish the reality of these creatures quite apart from the vicissitudes of eyewitness testimony—even Rines's own sighting in 1972. "For about 10 minutes," he recalls, "we watched a hump go out of Urquhart Bay, turn round, come back and submerge in front of us. I couldn't believe it. I had great trouble getting the Super 8 cine-camera to my eye, I just wanted to keep looking. Eventually, I did get some footage of what looked like a blob on the water, but I had a telescope with me and what I saw resembled the back of an elephant. I could make out its crest and its mottled grey skin. Estimating its size from a fifty-four-foot boat on the loch, we decided the hump was at least twenty-five feet and four feet out of the water."

Sources: Interview with Robert Rines by Patrick Huyghe, March 1997; Robert H. Rines, C. W. Wyckoff, H. E. Edgerton, and M. Klein, "Search

for the Loch Ness Monster," *Technology Review,* June/July 1976; Henry Bauer, "The Case for the Loch Ness 'Monster,'" *Journal of Scientific Exploration,* Vol. 16, No. 2, Summer 2002.



TYPE:
WATERHORSE

CATEGORY: Long Neck

Descriptive Incident:

DATE: July 5, 1977

LOCATION: Lake Champlain, St. Albans, Vermont

WITNESSES: Sandra and Anthony Mansi and her children

ON A WARM SUMMER DAY, ANTHONY AND SANDRA Mansi (who were engaged at the time) and her children were traveling by car from Vergennes to St. Albans, Vermont. They had spent the night with Sandra's relatives near Vergennes, then drove along Rural Route 36, and stopped for a picnic at a lakeside field north of St. Albans.

Afterward, as Mansi watched her children play in the water, she saw an object in the middle of the lake. At first, she thought it was a

large fish, then perhaps the hand of a diver surfacing, but finally she realized it was the grayish-brown head and long snake-like neck of a creature breaking the lake's surface. Its head seemed to be twisting around, scanning the countryside, Mansi later told Loren Coleman in an interview. The monster had a skin "like an eel," she said, and was "slimy looking." Although scared to death, she rushed to get her Kodak Instamatic camera from her car, and snapped one shot of Champ, before, as she put it, they "hightailed it out of there."

"We had trouble rationalizing it, so we decided to call it a 2,000-pound duck," she told participants at the August 1981 Lake Champlain seminar, where she decided to publicly reveal the details of her experience for the first time. "It's easier to live with a 2,000-pound duck than something you don't know."

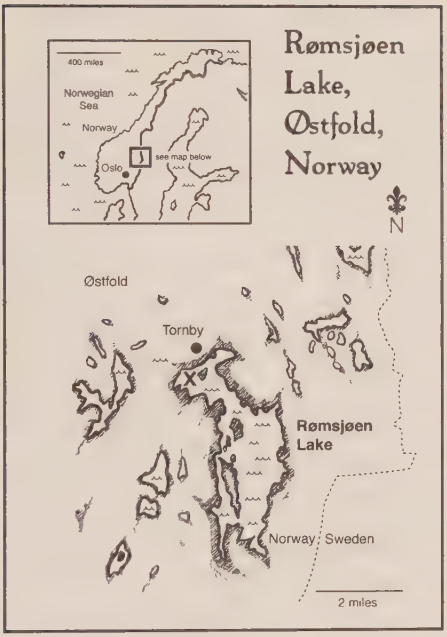
Fearful of the jokes and ridicule she might be subjected to outside her family, Mansi hid the picture for three years. Finally, encouraged by friends and the growing interest in Champ promoted by Joseph Zarzynski, a New York social studies teacher who was investigating reports of the Lake Champlain Monsters, Mansi, by now living in Winchester, New Hampshire, produced the photograph and held it up for scrutiny by academic researchers interested in the Monster.

It was not a pleasant experience. Mansi suffered for months from nightmares, self-doubt, and her fears of public ridicule. "It's frightening," she said, "and sometimes I wish I hadn't told anyone about the picture, or I hadn't seen the monster." The fact that Mansi, following a divorce and relocations, had lost the negative by that time and had never known the exact location of the sighting led to some difficult moments, as her credibility was questioned.

But the experts now uniformly hold the photograph in high regard. Zarzynski calls it "the single most impressive piece of evidence" for Champ. University of Chicago biologist Roy Mackal, along with cryptozoologist J. Richard Greenwell of the Office of

Arid Land Studies and photo analyst B. Roy Frieden of the Optical Sciences Center, both of the University of Arizona, examined Mansi's photograph and subjected it to computer analysis. Frieden, a professor of optical sciences, found no evidence of a montage or superposition. Greenwell and Mackal were similarly convinced that Mansi had snapped a picture of an unknown animate object in the lake. In 1999, the skeptical producers of the PBS program *Nova* would run more analyses and claim that the Mansi photograph was one of the few pieces of good evidence for an unknown animal in any lake in the world. In 2003, an in-depth skeptical analysis of the photograph concluded that the creature or object was about half as large as Mansi had reported—or she had misjudged how far away it was.

Sources: Loren Coleman, "Champ," in *Mysterious America: The Revised Edition* (New York: Paraview Press, 2001); Interview with Sandra Mansi by Loren Coleman, 1981; Joseph Zarzynski, *Champ: Beyond the Legend* (Wilton, NY: M–Z Information, 2nd edition, 1988), pp. 61ff.; PBS, *Nova*, "The Beast of Loch Ness," January 12, 1999.



TYPE:
WATERHORSE

CATEGORY: Merhorse/ Long Neck (juvenile)

Descriptive Incident:
DATE: July 1992
LOCATION: Rømsjøen Lake, Norway
WITNESSES: Thorleif and Bjørg Bøhn and their daughter Anne Grethe

RØMSJØEN IS A LARGE LAKE IN SOUTHEASTERN NORWAY, near the Swedish border. Since the 1700s, reports of Sea Serpents in the lake describe a monster with the head of a calf and a body like a log.

A case of some note occurred on September 20, 1976, when a busload of children; the bus driver, Asbjørn Holmedal; and his wife saw a huge, 23- to 33-foot-long, many-humped beast in Rømsjøen. The Holmedal sighting spurred new interest in the monster, locally called Rømmie, and led many new and old reports to surface. Witnesses said they saw a creature that had a black, pipe-like body, with a "tail like a fin." Land sightings told of a crawling mass, like a shell-less snail or slug, but 9 to 12 feet long.

In 2001, cryptozoologist Espen Samuelsen, who has searched for Lake Monsters in Sweden, Norway, and Ireland, journeyed to Rømsjøen to follow up newspaper stories of sightings in the 1990s. He

interviewed witnesses and local authorities. One of the most impressive sightings he investigated occurred early one morning in July 1992, when Bjørg Bøhn, her husband Thorleif, and their daughter Anne Grethe were at their holiday home in the village. At 8 A.M., Bjørg went for her daily morning swim, and then returned to their cabin. Looking out the cabin's window at the dead-calm lake, she saw a dark object in the water, about 33 to 49 feet from the shore. The thing was about 5 feet long and 10 to 12 inches or more in width, and rose out of the water some 4 to 6 inches.

Bjørg called her husband and daughter: "Come and see, the sea serpent's coming! No wait, it's a crocodile." Samuelsen concluded that the object looked a bit like the underside of a boat, with a pattern on its back. Bjørg, who felt she saw only the back, said the pattern reminded her of a crocodile's. The three watched the object approaching the shore at speed, and clearly saw a small wake behind it. After about 10 to 15 seconds, it dove suddenly and disappeared.

The Bøhn family members are good friends of Asbjørn Holmedal, and had often made fun of his Rømmie sighting. "Now it had become a reality for them too," observed Samuelsen, in his report on the sighting.

Sources: Epsen Samuelsen, "In Search of Norway's Nessie," *Fortean Times* 154, January 2002; Personal correspondence between Espen Samuelsen and Loren Coleman, November 2002.

TYPE:
WATERHORSE

CATEGORY: Long Neck

Descriptive Incident:
DATES: January 1, 1994, and Summer 1996
LOCATION: Lago Nahuel Huapí, Argentina
WITNESSES: Jessica Campbell and Paula Jacarbe

LAGO NAHUEL HUAPÍ ("LAKE OF THE TIGER'S ISLAND") is a huge lake covering more than 300 square miles at the base of the Patagonian mountains on Argentina's border with Chile. Bariloche, with a population of 100,000, lies on its southern shoreline. The monster in this lake is known to the locals as Nahuelito, as well as "El Cuero," meaning "the leathery one," due to its rough skin, and as "El Manto," meaning "the cloaked one," because of its "cloak-like fins."

During the late 1990s, Jessica Campbell and Paula Jacarbe told Christian Muller of Comunidad de la Cuenca de Nahuel Huapí, a local environmental and conservancy society, of their sightings that occurred during the summers of 1994 and 1996. Muller forwarded the reports to John Kirk, president of the Canadian cryptozoological society. Muller related that the first encounter occurred while the two women were relaxing on the beach in an area known as the

Peninsula de San Pedro. There was no wind, and the lake was perfectly still.

"Suddenly," says Muller, "they saw this creature swimming near the shore at about 18:00 hrs. One of them shouted to the other people to see if anybody had a camera handy to take some shots of the creature. They described Nahuelito as being as big as a whale with its back showing many humps. . . . This is something that many people who have seen it agree it is like."

Jessica Campbell also reported having seen Nahuelito twice in the same day, two years later during the summer of 1996. Campbell, Muller noted, "saw small fins [flippers] it used to swim, and she also remembered its breathing. She told me she would never forget this. The young woman never saw a head. After this nerve-wracking experience Jessica sat on a rock by the shore, and 45 minutes later the creature appeared again swimming towards the spot where she was sitting, this time, she told me, 'I decided to run . . .'"

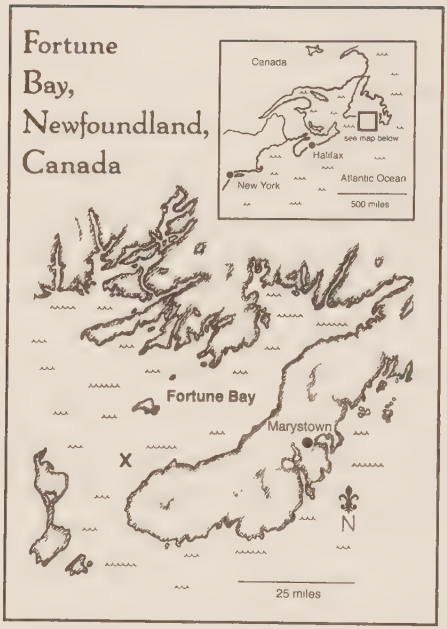
Muller told Kirk that he, too, had seen the large, dark hump of the beast in the summer of 1991, when he was traveling on a bus about five miles from Bariloche. At first, the passengers thought it was a ship on the lake. Then, for a while, trees between the road and the lake did not permit a clear view of the lake. When the lake reappeared, the "ship" suddenly submerged under the water; the driver, who was also watching this, abruptly stopped the bus and opened the door, and someone in the bus shouted, "Nahuelito, Nahuelito!!!"

Nahuelito is generally seen on clear and sunny days at the height of the Argentine summer (January and February). The creature has been of media interest since expeditions set out in search of the "Patagonian Plesiosaur." Beginning in the 1890s, the director of the Buenos Aires Zoo, Clementi Onelli, gathered accounts of tracks and trampled bushes near an unnamed lakeshore. Then, in 1922, American gold prospector Martin Sheffield saw a creature with "a huge neck like a swan," and Nahuelito got into the South American

newspapers. One expedition was even mentioned in *Scientific American*. During a period of media attention in 1922, George Garrett came forth to tell the *Toronto Globe* of April 2, 1922, that he had seen Nahuelito in Lago Nahuel Huapí in 1910.

Nahuelito gets good press in South America, though it is scarcely mentioned in North America. A boom in the tourist population (Bariloche has become a skiing Mecca) appears to be directly related to the new sightings of the 1990s.

Sources: Peter Costello, *In Search of Lake Monsters* (New York: Coward, McCann & Geoghegan, 1974), pp. 233–44; John Kirk, *In the Domain of the Lake Monsters* (Toronto: Key Porter, 1998), pp. 250–54; John Kirk, BCCSC website for investigator's quotation, and personal communications with Loren Coleman, 2002.



TYPE:
WATERHORSE

CATEGORY: Long Neck

Descriptive Incident:
DATE: May 4, 1997
LOCATION: Fortune Bay, Newfoundland, Canada
WITNESSES: Charles Bungay and C. Clarke

AT ABOUT NOON ON A SUNDAY IN MAY 1997, TWO fishermen, Charles Bungay and C. Clarke, were out fishing in Fortune Bay on the southern coast of Newfoundland. Spotting what appeared to be floating garbage bags in the distance, they decided to haul them aboard. But when they got to within 50 feet of the "bags," a creature reared its head.

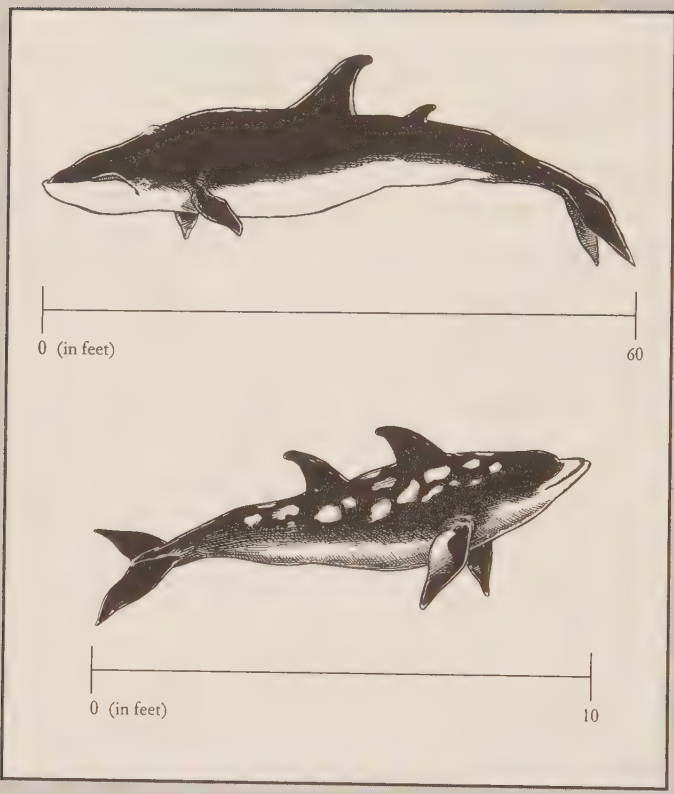
"It turned its head and looked right at us," Bungay told the reporter for the *St. John's Evening Telegram* in a story datelined May 6. "All we could see was a neck six feet long, a head like a horse, but his dark eyes were on the front of the face . . . like a human." The creature just looked at Bungay and Clarke, then slid under the water and disappeared.

In an interview with University of British Columbia oceanographer Paul LeBlond, Bungay estimated the creature's length at

somewhere between 30 and 40 feet. He also added that it had "ears" or "horns" about six to eight inches long and a scaly skin.

This is the latest in a long series of sightings made by hundreds of people off the coast of New England since 1638. But most of the sightings, as cryptozoologist Bernard Heuvelmans notes, took place in the hundred years between 1777 and 1877, with two-thirds of those occurring in a region that extends from the Gulf of Maine up through Newfoundland.

Source: J. P. O'Neill, *The Great New England Sea Serpent* (Camden, ME: Down East Books, 1999).



Mystery Cetacean

PHYSICAL CHARACTERISTICS

The Mystery Cetacean resembles animals from the group of water-dwelling mammals that includes baleen whales, sperm whales, beaked whales (the ziphiids), killer whales, narwhals, porpoises, and dolphins. All have elongated, streamlined bodies, which lack hind

limbs, possess front limbs that evolution has modified into flippers, and show no signs or vestiges of nails or external ears. Their powerful tail shows various forms but is generally similar, and the major source of propulsion comes from the vertical use of the flukes, especially through a downward push. Their skin is smooth and hairless, with only a few bristles on the head of some animals. The Mystery Cetacean resemble the known modern cetaceans, which fall in two suborders: Odontoceti, the toothed whales; and Mysticeti, the baleen whales. A major difference among the varieties of cetaceans, and thus likewise the Mystery Cetacean, is in the number and kind of dorsal fins on the back of the animal.

RANGE

The Mystery Cetacean is found worldwide in all major oceans, seas, and coastal waters.

HISTORY

Scientists seem more receptive to the possible existence of a number of as-yet-unrecognized species of cetaceans than your run-of-the-mill Sea Serpents. Perhaps for that reason, cryptozoologists often overlook reports of unknown cetaceans. They shouldn't; it may seem obvious that the animal seen is a familiar one—that it is a whale or a dolphin, for instance—but in fact, the animal may be one that is unknown to science.

Sightings of unrecognized cetacean species may occur during systematic surveys that scientists undertake to track the populations of known cetaceans in a specific area. These surveys are often focused on the biology and conservation of whale and dolphin species.

Some Mystery Cetaceans are clearly beaked whales, which are archaic whales in terms of some of their features. They look like moderately sized whales with the head of a dolphin, and some males

display teeth that might look like tusks. Half of the species of beaked whales are known from only one specimen. There are twice as many unrecorded species of beaked whales as there are known species. One of these is the White-finned Beaked Whale, which is often seen in the North Atlantic. It is all black above and all white below, with all-white flippers. Another unrecorded species is the Shovel-Headed Whale, which gets its name due to its flat head. These whales are dark with a low dorsal fin and a wide base. The larger ones have what look like "racing stripes" along their body.

Scientists are pursuing at least two other as-yet-unverified beaked whales. One of the world's leading authorities on cetaceans, Robert L. Pitman of the Southwest Fisheries Science Center in La Jolla, California, has noted that these two are the so-called *Mesoplodon* sp. A, known from more than 30 sightings, and the "Tropical Bottlenose Whale," also seen numerous times. He says that while both are ziphiids, the *Mesoplodon* sp. A is a smaller whale with a very distinctive pattern, and the Tropical Bottlenose Whale is a larger beaked whale. But neither will be officially named until a stranded or captured animal can be examined and identified. As Pitman observed late in 2002: "There are undoubtedly going to be more beaked whales described in the future."

Another Mystery Cetacean is the High-finned Whale, which has been seen for more than 200 years but has yet to be recognized by science. Sir Robert Sibbald, the cetological pioneer, named two specimens stranded near the Sheland Islands in 1692. They were 45 to 60 feet long, with a dorsal fin like a mizzenmast, and resembled a sperm whale with a more rounded head. In 1842, Captain James C. Ross reported seeing a high-finned black whale near Ross Island in Antarctica. In 1868, a grayish-black whale with a dorsal fin at least five feet long was seen by a fellow of London's Zoological Society, E. W. H. Holdsworth, off Sri Lanka's west coast. Another black specimen was seen on two occasions, ten days apart, in 1902, by a

member of Robert F. Scott's *Discovery* expedition. In 1946, a creature that spouted like a whale and had a high dorsal fin was spotted at Digby, Nova Scotia. And in November of 1964, cetologist Robert Clarke and colleagues made eight sightings of some High-finned whales during a whale-marking and observation cruise off the coast of Chile.

It's not unusual for newly sighted cetaceans to remain unidentified for a century or more. And often, the sightings of two or more distinct types are lumped together, as has happened with the two kinds of double-finned cetaceans unknown to science, which we will elaborate on with case descriptions here. The French researcher Michel Raynal has carefully examined the historical record and very capably managed to distinguish between the two. One is a large baleen whale with two dorsal fins and solid coloring; it has been seen in the South Pacific, North Atlantic, and Mediterranean. The other also has two dorsal fins but is a spotted animal; it has been seen in the Mediterranean, around the Hawaiian Islands, and near New South Wales. This smaller Mystery Cetacean has been called a Rhinoceros Dolphin, though it may not be a dolphin at all.

CANDIDATES

These unknown cryptid Cetaceans will probably fit directly into the organizational scheme of the known cetaceans, specifically the Odontoceti, or toothed whales, and the Mysticeti, or baleen whales. The most likely Mystery Cetacean to be discovered in the future is some form of beaked whale or ziphiid, which is a smaller variety of toothed whales.

TYPE:

MYSTERY CETACEAN

Descriptive Incident:

DATE: October 1819

LOCATION: Western South Pacific

WITNESSES: Jean-René Constant Quoy and Joseph Paul Gaimard

EN ROUTE FROM HAWAII TO NEW SOUTH WALES, Australia, two French naturalists, leaders of the *Physicienne* and *Uranie* expeditions, spotted a school of most unusual "dolphins." The animals "had on their front a horn or a fin bent backward, the same as that on their backs"—two dorsal fins, in other words. The upper part of their bodies—from the head, along the back, all the way to the rear fins—was spotted black and white. The crews watched transfixed as the animals, which were about twice the size of the common porpoise, swam rapidly around one of the ships.

"We did the best to observe these dolphins all the time they accompanied us," noted Quoy and Gaimard in 1824. The dolphins almost touched the prow of their vessels as they passed, revealing the highest parts of their backs, which were out of the water. But unlike other species, they "never sprang above the waters." The observers

therefore never saw the dolphins' heads, whether their snout was short or elongated.

These gregarious dolphins were estimated to have been about ten feet in length. In their drawing, the naturalists placed the front dorsal, which in cetaceans is made of connective tissue, directly behind the head. They named the animal *Delphinus rhinoceros.* But since there is no evidence that the animal belongs to the genus *Delphinus,* nor even to the Delphinidae family, researcher Michel Raynal has suggested the name *Cetodipterus rhinoceros* if the animal turns out to represent a new genus.

While there have been other observations of dolphins with two dorsal fins, this one stands out because all the dolphins in the school were apparently alike. Critics have managed to dismiss other reports of this kind because most observations involve a single such animal, which they explain as a common species with an anomalous growth, this second dorsal fin. It is seen as a "monster" in the teratological sense, in other words. But the number of two-dorsal-finned dolphins in this case negates such a possibility.

Evidence of the existence of these animals in antiquity is suggested by the terra-cotta representation of dolphins with two dorsal fins in ancient Greek art, dating back to the third century B.C. and found in southern Italy.

Source: Jean-René Constant Quoy and Joseph Paul Gaimard, *Voyage autour du monde exécuté sur les corvettes de S.M. l'Uranie et la Physicienne, pendant les années 1817, 1818, 1819, et 1820* (Paris, Pillet Aîné, 1824), Zoologie, 1: 86, cited in Michel Raynal, "Cetaceans with two dorsal fins?" Virtual Institute of Cryptozoology website.

TYPE:
Mystery Cetacean

Descriptive Incident:
DATE: September 4, 1867
LOCATION: South Pacific, off the coast of Chile
WITNESSES: Enrico Hillyer Giglioli and crew of *Magenta*

One could not ask for a more detailed description of an unknown animal than that provided by the Italian naturalist Enrico Hillyer Giglioli, who saw it during his three-year scientific expedition around the world aboard the Italian research vessel *Magenta*. The ship was about 1,200 miles due west of Huasco, Chile, and had just turned off its steam engines when Giglioli heard a noise followed by a visible spray of water from what seemed to be a whale's blowhole.

At that moment, the greenish-gray back of a whale appeared right next to the *Magenta*. Remarkably, noted Giglioli, the whale had two well-developed triangular dorsal fins. All whales known to science (then and now) have one dorsal fin, a nubbin, or none, but never two. Since the whale stayed next to the ship for nearly a quarter of an hour, Giglioli was able to take an exact measure of the

whale's size—about 60 feet from the snout to the tip of its tail. The distance between the two dorsal fins measured about 6½ feet. Wrote Giglioli:

> *The head was not larger than the body and diminished gradually toward its snout, which was relatively large and blunt; the lower jaw exceeded the beak, but not by much. The top of the head was convex and streamlined, its nostrils apparently in a depression. The general contour of the body, viewed from above, was elongated; the posterior region in back of the second dorsal fin was very narrow and streamlined before being lost in the lobes of the tail, which was of discrete dimension and of usual shape. The color of the uppermost section was a greenish-gray, darker than the lower portion and the fins; the skin looked like velvet.*

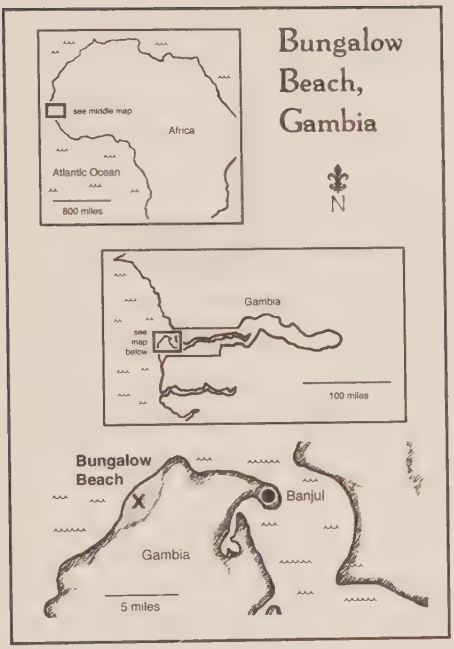
Giglioli compared it to a rorqual whale with black whalebones. The whale blew for eight to ten seconds about every two minutes. The commander of the *Magenta* wanted to kill the whale but it was so close to the ship that he could not position a cannon properly. When he dropped a dinghy on the opposite side, the whale took notice of the movements, turned on its side, and began to move away. The lower portion of the whale then revealed itself to be a grayish-white color.

Giglioli could see no trace of the furrows that are so characteristic of rorqual whales. Commenting on this missing feature, the French researcher Michel Raynal notes: "The furrows allow for a greater volume of water (and therefore the quantity of plankton) swallowed by the whale, but the furrows play an equal role in the stabilization of the animal; in a whale with such a mechanism for stabilization (*two* dorsal fins), the furrows would probably be superfluous."

Giglioli made a detailed drawing of the whale and called it *Amphiptera pacifica,* meaning "the one from the Pacific with a fin on each side."

A year later, the skipper of the fishing boat *Lily,* while off the coast of Stonehaven, Scotland, spotted a whale of similar size with two dorsal fins. And in 1983, the crew of a 40-foot sailboat told the French zoologist Jacques Maigret that as they traveled in the Mediterranean between the island of Corsica and the French mainland, a large animal with two dorsal fins, a trapezoid-shaped head, and a white belly had followed their boat. They were certain that the animal was not a shark.

Source: Michel Raynal, "Cetaceans with Two Dorsal Fins," *Virtual Institute of Cryptozoology,* February 2002.



TYPE:

Mystery Cetacean

Descriptive Incident:

DATE: June 12, 1983

LOCATION: Bungalow Beach, Gambia

WITNESSES: Owen Burnham and family

Owen Burnham, a wildlife enthusiast who grew up in Senegal, is an honorary member of the Mandinka tribe and speaks the Mandinkan language. While on holiday in the neighboring West African country of Gambia, the 15-year-old Owen, along with his brother, sister, and father, came across two Africans at 8:30 in the morning who were trying to sever the head of an enormous animal that had washed up on the beach. Unlike most finds of alleged Sea Monster remains, this one showed no signs of external decomposition. Burnham, who is very familiar with the region's fauna, was quite intrigued by the find, but since he did not have a camera with him, he decided to make a detailed observation of the creature, taking careful measurements of its morphology and drawing meticulous sketches. Only later, after an unsuccessful attempt to

locate his find in the existing zoological literature, did he realize that he should have obtained tissue samples.

Three years later, zoologist Karl Shuker read of Burnham's discovery in a British magazine, whereupon Shuker wrote to Burnham for further details. The top of the creature was brown, Burnham said, the bottom to midway down the tail was white. Its body and head measured 10 feet long; its rounded—not quite triangular—tail was 4.5 to 5 feet; its snout 1.5 feet; and its flippers—round with no toes, claws, or nails—1.5 feet long. One of its hind flippers had been ripped off, revealing some intestines; the other was just slightly damaged. Otherwise, its skin was smooth and did not show any obvious sexual organs. The jaws of the animal were long and thin with 80 uniform teeth evenly distributed.

"There was no sign of any blowhole but there were what appeared to be two nostrils at the end of the snout," Burnham wrote to Shuker. "The creature can't have been dead for long, because its eyes were clearly visible and brown although I don't know if this was due to death. (They weren't protruding.) The forehead was domed though not excessively. (No ears.)"

With considerable difficulty, since the vertebrae were very thick, the Africans finally managed to hack off the head with a machete, in order to sell the skull to a tourist. When Burnham asked the men what the animal was, they gave him the Mandinka name for dolphin, which translates as "cutting jaws." Burnham could only assume "that the butchers called it by that name due to its superficial similarities," he wrote. "In Mandinka, similar or unknown animals are given the name of a well-known one."

Burnham considered many possibilities for the found remains. Was it a dolphin? Not with a long, pointed tail, or lack of a dorsal fin. Was it a manatee? Only the skin thickness was the same. A crocodile? Obviously not. How about the rare Tasman Beaked Whale? The coloring and dentition match, but this creature had no dorsal

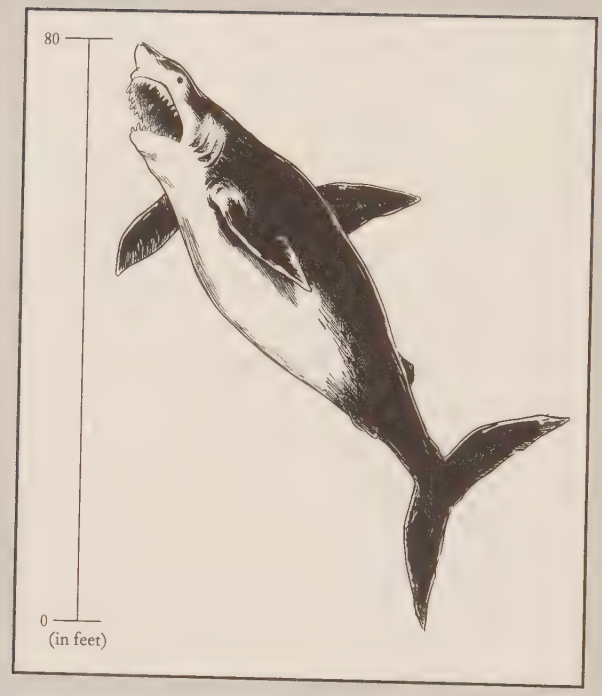
fin. Burnham discounts the beaked whale, but the generally skeptical cryptozoologist Chris Orrick seems convinced that it was one.

"What if the rear portion of the carcass had been slightly twisted?" Orrick wrote in an email-list discussion group on the Internet. "On a Tasman Beaked Whale the small dorsal fin is located well to the rear of the animal. Burnham might have mistaken the partially mangled dorsal fin as the 'damaged rear flipper.' Exactly opposite that 'flipper,' in a female, would be its noticeable genital slit—the one he described as the 'ripped off one.' With the singular exception of the pair of nostrils at its tip, everything Burnham described can be reasonably explained, and most especially by a female Tasman beaked whale."

Shuker came to Burnham's defense: "The carcass would need to have been more than slightly twisted in order for the dorsal fin and genital slit to become aligned as if sited laterally as a pair, and there is no indication of such torsion either in Burnham's description or in his sketches. Nonetheless, it is an interesting hypothesis, except for the fact that Burnham stated that where the flipper had been ripped off, the body itself had been ripped open, revealing the gut inside, a situation that one would not expect if the ripped off flipper had in reality merely been the genital slit."

Besides, beaked whales don't have necks, and this one clearly did. Could this have been an unknown form of beaked whale?

Sources: Karl P. N. Shuker, *In Search of Prehistoric Survivors* (London: Blandford, 1996); Cryptozoology listserve discussions, June 1999.



Giant Shark

PHYSICAL CHARACTERISTICS

The Giant Shark is probably a variety of unknown sharks, the carnivorous fishes of the class Chondrichthyes (subclass Elasmobranchii). Sharks are sometimes aggressive, often enormous, and have elongated, streamlined, torpedo-like bodies, with five to seven gill openings on each side of the head, a cartilaginous skeleton, large

jaws, sharp teeth, and a tough skin covered with small tooth-like scales. One important indicator that these cryptid sharks are not mammals is that they swim by moving their tails side to side rather than up and down.

One Giant Shark discussed here is an immense creature that resembles a great white shark, but is two to three times its length. A few large known sharks do exist, such as the basking shark and the whale shark, and they grow to enormous dimensions—the basking shark to 40 feet and the whale shark to 60 feet. But these two are not aggressive. Some other kinds of large sharks are extremely voracious, however, and include the man-eating sharks mostly belonging to the genera *Carcharhinus, Carcharodon,* and related genera, which are not more than 36 feet long. The Giant Shark is generally as large as, or larger than, the largest known sharks, and is seen in areas where no sharks more than 26 feet long are known.

RANGE

Reports of cryptid sharks issue from all the waters of the world.

HISTORY

The most terrifying scientifically recognized creature alive today is undoubtedly the great white shark, *Carcharodon carcharias,* which is known to attain lengths of up to 26 feet. But there are reports of an even larger shark, one that is twice the size, if not larger. In the late 1920s, Zane Grey, the western writer who had considerable experience hauling in fishes of record-breaking size, spotted an immense shark while sailing off the Polynesian island of Rangiroa. The shark, which was larger than his own 40-foot boat, had a square head, a green-and-yellow body with a few white spots, and huge pectoral fins. Grey's son, Loren, reported seeing a similar creature in the same general area in 1933. The shark was about 40 to 50 feet in

length, yellow in color and flecked with white, with a head some 10 to 12 feet across, and a large brown tail. He was certain that the creature was not a whale shark.

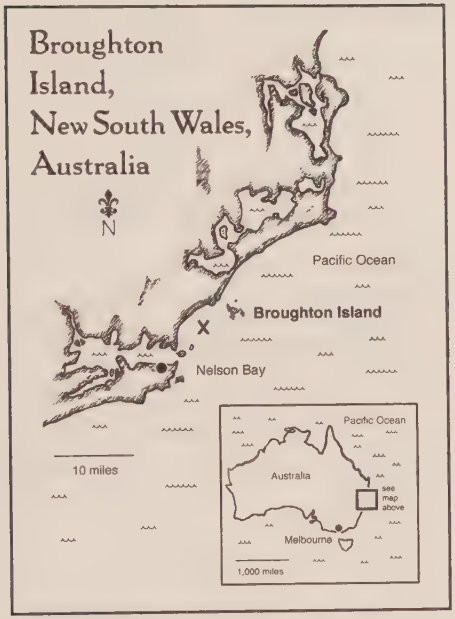
According to Polynesian fishermen, the waters off the coast of New South Wales, Australia, are home to the "Lord of the Deep." They describe the frightening creature as looking like a great white shark but a hundred feet in length.

CANDIDATES

Fifty million years ago, during the Middle Tertiary Period, there lived a close relative to the great white shark named the megalodon shark, *C. megalodon*, meaning "big tooth." Its teeth measured up to six inches long, were triangle-shaped and sharply serrated. From the hundreds of megalodon teeth that have been pulled from the world's oceans, scientists estimate that the creature may have reached a length of about 80 feet.

Scientists consider the megalodon extinct. But how recent is its extinction? Based on a 1959 analysis of the deposit on a megalodon tooth found on the seabed 14,000 feet down by the British oceanographic vessel *Challenger* in 1875, the tooth was no more than 11,000 years old, which is not very long ago at all, geologically speaking. If the megalodon was still alive at the end of the Pleistocene, it's possible that the species remains alive today.

The question of other potential candidates is raised within the case descriptions.



TYPE:

GIANT SHARK

Descriptive Incident:

DATE: 1918

LOCATION: Broughton Island, Australia

WITNESSES: Port Stephens fishermen

IN 1918, SOME FISHERMEN FROM PORT STEPHENS TOLD David G. Stead, an Australian ichthyologist, of a remarkable encounter at sea. They had been crayfishing in the deep waters off Broughton Island when an immense shark appeared, lifting the 3½-foot-wide crayfish pots one after another and taking off, as one of the men said, with "pots, mooring lines and all."

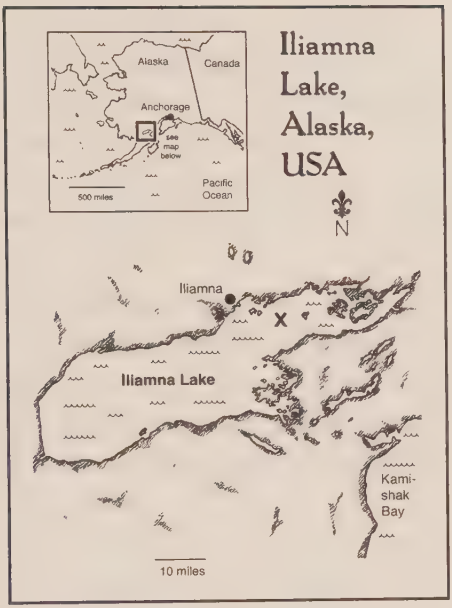
Stead questioned the men in the company of the local fisheries inspector, and each agreed that the beast was gigantic—even absurdly so. One said that the beast was 300 feet long, another said that it was longer than the wharf on which they stood, about 115 feet. Even accounting for a generous margin of exaggeration, the shark was clearly larger than any known great white. "They were all familiar with whales," wrote Stead, "which they had often seen passing at sea, but this was a vast shark."

Stead was impressed that they all agreed on the color of the

shark—a ghostly white. Stead said the fishermen had all noted that the water had "boiled" over a large space when the shark swam past, and that its head was "at least as long as the roof on the wharf shed at Nelson's Bay."

The fishermen did not return to sea for several days after the encounter, a fact that adds to their credibility. Stead believed that they were telling the truth and that they may have witnessed a living megalodon. Stead claims to have witnessed some nonfossilized teeth five inches long, further suggesting that the megalodon is far from extinct.

Source: David G. Stead, *Sharks and Rays of Australian Seas* (London: Angus & Robertson, 1964).



TYPE:
GIANT SHARK

Descriptive Incident:
DATE: September 1942
LOCATION: Iliamna Lake, Alaska
WITNESSES: Babe Alsworth and Bill Hammersley

ILIAMNA LAKE, LOCATED ON ALASKA'S SOUTHERN coast, is the seventh largest freshwater lake in the world. Eighty miles long and 25 miles wide in spots, it covers 1,000 square miles. The average depth is 660 feet, though in Pile Bay at the eastern end the lead dropped to 1,350 feet on one sounding, and then the line ran out. Once part of the ocean, the lake is now less than a hundred feet above sea level and is said to be inhabited by Illie, the Lake Monster of Iliamna, a creature known to the local Inuits.

Local guide and pilot Babe Alsworth and fisherman Bill Hammersley had a bird's-eye view of the creature in September of 1942. Alsworth was taking his Stinson ferry plane over the deep, blue-black water toward the village of Iliamna when he noticed some unusual specks in the water near the unnamed island in the middle of the lake.

"Oh my God," Alsworth shouted, "what big fish!" and he turned

the plane around for a closer look. Both Hammersley and Alsworth got a good look at the creatures. There were several dozen of them. Alsworth and Hammersley described them as dull aluminum in color with heads that were broad and blunt. Their heads were as wide as their long, tapered bodies, and their vertical tails slowly waved side to side. (Whale tails move up and down. Fish and reptile tails move side to side.)

Spiraling down from 1,000 to 300 feet, the two soon realized that Alsworth's initial estimate of their length at ten feet was considerably short. The fish were longer than the plane's pontoon and looked like mini-submarines. The creatures circled for several minutes, then suddenly surged in the water and disappeared in a distinct wave disturbance.

As the two men continued on their journey, they discussed and debated what they had seen, eliminating whales, walruses, or seals because the animals they saw never blew or surfaced. Known sharks would be much smaller. Local people, most notably skeptic Arthur Lee, thought they might be cod, a theory the witnesses emphatically rejected. Once word got around Iliamna, authorities told Hammersley that he had only seen belugas (white whales, *Delphinaperus leucas*). Hammersley countered that he had seen thousands of belugas during his years of fishing Bristol Bay and their white backs, tapering heads, and horizontal tails were in no way like what he and Alsworth had seen. The lake's close proximity to the ocean has fueled speculation that the Lake Monsters are landlocked sturgeon or some unknown prehistoric fish, but no dead sturgeon or even landlocked belugas have ever washed up on the shores of Iliamna.

After leaving his Defense Department job in 1947, Hammersley published a short piece on the mystery fish to try to get others to investigate the matter or to come forward with reports. One who did was Larry Rost, a U.S. Coast and Geodetic Survey pilot. While fly-

ing across Lake Iliamna in the fall of 1945, he saw something in the water that made him turn the plane around, finally passing just 100 feet over this giant fish, which was more than 20 feet long and the color of dull aluminum.

Interviewed by Loren Coleman in 1998, Alsworth reaffirmed the details of his 1942 sighting and stated that the fish were swimming in water that was only about 40 feet deep. Alsworth recalled that adventurer Tom Slick had several times hired him to fly Slick and his boys to moose-hunting sites, and in the fall of 1959 to seek out the Monsters of Lake Iliamna. Slick had offered a reward of $1,000 to anyone who could catch one of the mystery creatures, and Slick himself was in charge of getting lines set with barrels for buoys. He even hired a helicopter to hover over the exact spot where Alsworth had had his encounter. But Alsworth and Slick never saw the big unknown animals on these flights, and, indeed, the pilot said that he went over that place in the lake more than 100 times without seeing them again.

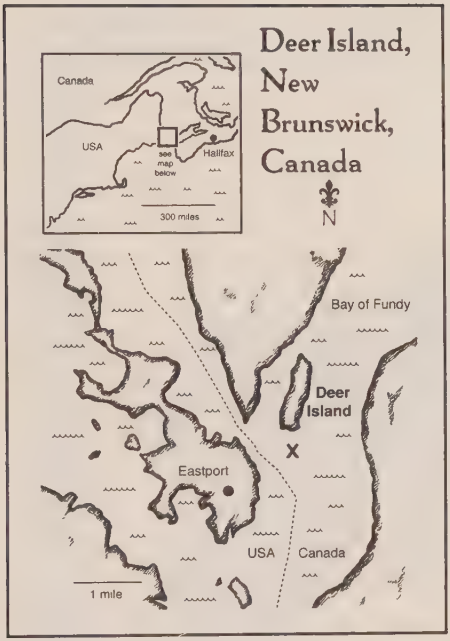
The January 1959 issue of *Sports Afield* carried an article titled "Alaska's Monster Mystery Fish," by Gil Paust, who chronicled more than 30 years of reports of huge fish in Lake Iliamna. Paust detailed his own adventures in trying to catch this monster fish. He, along with Iliamna Lake Monster hunters Slim Beck, John Walatka, and Bill Hammersley, used a Bushmaster seaplane as a dock and some homemade monster-fishing gear. The four attempted to catch the big one with a hook made from a foot-long, quarter-inch-thick iron rod baited with a chuck of moose flank. Their line was several hundred feet of 16-inch stainless-steel aircraft cable. A 55-gallon oil drum was the bobber.

But the thing snapped the line.

In October 2000, cryptozoologist Matthew Bille interviewed Alaskan air-taxi pilot Tim LaPorte, who had been flying over the

lake for 27 years. LaPorte reported that he had twice flown over a very large fish-like creature that dove straight down when his plane flew over. Bille remarked that the sightings of Illie are ongoing.

Sources: Interview with Babe Alsworth by Loren Coleman, 1988; Matthew Bille, Personal communication with Loren Coleman, 2000; Loren Coleman, *Tom Slick: True Life Encounters in Cryptozoology* (Fresno: Linden, 2002); Gil Paust, "Alaska's Monster Mystery Fish," *Sports Afield*, January 1959; Ivan T. Sanderson, *"Things"* (New York: Pyramid, 1967).



TYPE:
GIANT SHARK

Descriptive Incident:

DATE: Mid-October 1999

LOCATION: Off Deer Island, New Brunswick, Canada

WITNESSES: Bill Curtsinger and Heather Perry

AN INTERNATIONALLY KNOWN UNDERWATER PHOTOGRAPHER, Bill Curtsinger was a member of an elite U.S. Navy photo unit, the Atlantic Fleet Combat Camera Group, based at the Naval Air Station, Norfolk, Virginia. From 1967 to 1970, he traveled the world on special assignments for the commander-in-chief of the Atlantic Fleet. After leaving the navy in 1970, Curtsinger worked as a photographer for scores of magazines, including *National Geographic*, *Smithsonian*, *Outside*, *Time*, *Newsweek*, *Audubon*, and *Natural History*.

With a job like his, Curtsinger has seen marine animals all over the world in the last 30 years. But the strangest creature he ever saw was one he encountered closer to home, in 1999. It was mid-October, and Curtsinger and his experienced diving companion, Heather Perry, had just conducted a late-morning dive off the southern tip of Deer Island, New Brunswick, Canada, which is across from East-

port, Maine. They were on their way back to dock when they heard a big splash, like the sound of a whale breaching. They both turned to look in that direction, which was just northeast of their location, probably about 500 yards away, and caught the end of a splash. Then they heard another "thrash and splash" noise, as they called it.

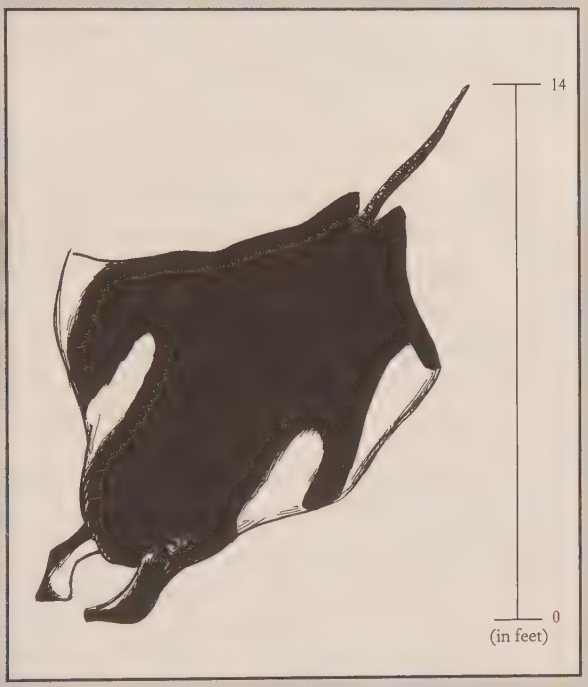
Suddenly what they saw "was a large appendage, perhaps a dorsal or caudal fin, very long and thin, crescent-shaped, and black. The 'fin' was maybe 6 to 10 feet long," Curtsinger remembered. The giant animal went under, and that was the end of it. They were in water that was 30 to 100 feet deep at the time.

In a set of interviews with Loren Coleman between 2000 and 2002, Curtsinger and Perry separately remarked on how it did not look like any marine animal that either of them had ever seen. But its shape and color did remind them vaguely of the caudal fin of an enormous thresher shark, which is usually found farther out at sea.

But what they saw was most unusual. "Thin and long, like a scythe," Perry recalled. "It thrashed like a tail, laterally, from right to left, the way big predators do in the middle of a bait ball—when a huge school of fish is schooling in one place." You would expect such a movement from a fish or reptile normally, not a mammal. They estimated its size at about 30 feet. "After the big thrash we saw, there was nothing," said Perry. "No big 'footprint' like whales leave, at least not that we could see, and it didn't come up again. We went over there and looked around and saw nothing. The whole thing was very quick and very brief . . . but very curious."

Concludes Curtsinger: "In all the oceans, seas, and lakes I've ever swam, dived, and been to, I've never seen anything like it."

Sources: Interviews with Bill Curtsinger by Loren Coleman, 2000–2002; Interviews with Heather Perry by Loren Coleman, 2001–2002.



Mystery Manta

PHYSICAL CHARACTERISTICS

The animals we are calling the Mystery Manta look like medium-sized manta rays but exhibit coloring and banding unknown in the recognized varieties of manta rays. The Mystery Manta has broad, brilliantly white, distinctly V-shaped bands that extend halfway down the back from each side of the head. Additionally, the Mystery Manta are generally smaller than the known giant manta, dis-

playing wingspans only about 10 feet wide versus the normal 26-foot wingspans. The cryptid's wing tips are usually white, especially the undersides, and the tails are relatively short. Often, the horns of Mystery Manta are said to be quite conspicuous.

RANGE

Mystery Manta are reported in warm waters around the globe, and have been seen in waters near Polynesia, the Galápagos Islands, New Caledonia, Baja California, the Great Barrier Reef of Australia, and off the coast of Africa in the Indian Ocean. There appear to be Mystery Manta examples in freshwater habitats, too.

HISTORY

Unknown forms of giant manta, or devil rays, have a long history, according to Gunter G. Sehm, who reviewed their history in 1996 in the journal *Cryptozoology*. In 1682, an unknown East Indies devil ray was recovered; 14 zebu oxen had to be used to pull the creature ashore. Records from the time state that this incredible beast had the typical lobe-like structures found on the wingtips of all manta rays, but none has seven spines on its tail, as this one did.

American explorer William Beebe had one of the most credible modern-era sightings of a Mystery Manta in 1923 near the Galápagos (see case, pages 150–151).

By the 1930s, the mainstream scientific literature began keeping track of the many sightings of the Mystery Manta. For example, in 1936, Dr. G. P. Whitley wrote in his "Studies in Ichthyology" in *The Australian Museum Magazine:* "There are other species, some yet unnamed scientifically, in the Red Sea, off the coasts of Africa, India, the East Indies, South America, and the South Sea Islands. Some of these exceed twenty-four feet in width."

Interactions with manta are so common that the unknowns among them are perhaps ignored or overlooked. For example, a

large unknown manta ray may be responsible for an October 1959 sighting in the harbor at Darwin, Australia, where a creature supposedly leapt from the water and flew above it at 80 miles an hour.

A growing body of photographic evidence points to at least one new variety of Mystery Manta. In 1976, a Mystery Manta with symmetrical white dorsal bands was photographed off Ouvea, New Caledonia. In 1977, photographs of another Mystery Manta with the same symmetrical white dorsal bands were published in a German edition of the book *Fishes of the World.*

A Mystery Manta has even been caught on film—twice. On December 28, 1989, a German documentary entitled *Sharks: Hunters of the Sea* showed a clip of a Mystery Manta, which had been filmed off the coast of Baja California, near Cabo San Lucas. The unidentified species of manta showed bright-white, symmetrical V-shaped bands on its dorsal surface. And on November 7, 1999, a BBC broadcast entitled *Holiday Guide to Australia* showed aerial footage over the Great Barrier Reef of an unknown manta ray with a pair of white longitudinal bands on its wings.

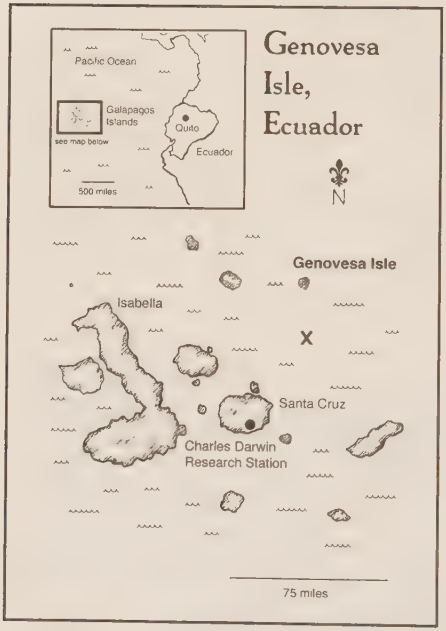
There is some evidence as well for the existence of a freshwater subtype of Mystery Manta. In 1983, newspapers in Thailand carried a photograph of a remarkable but unknown kind of ray taken from the Nakhon Phanom, a river in Thailand. The main body of the cryptid was 7 feet 10 inches wide; its tail was 7 feet 10 inches long as well. Another unknown ray, this time from the Chao Phraya River in Thailand, was said to measure 6 feet 6 inches long.

CANDIDATE

The one known species of manta, the giant manta ray (*Manta birostris*) may be responsible for some Mystery Manta sightings. While the adult giant manta ray has a wing-width of up to 26 feet, the smaller juveniles may not always be recognized as giant manta rays. Very old giant manta might also be mistaken for cryptids.

When old giant manta lose their pigmentation, they may acquire a blotchy look that might be confused with the Mystery Manta's distinctive black-and-white banding.

Despite these qualifications, there is strong evidence for the existence of the Mystery Manta as a distinct variety.



TYPE:
Mystery Manta

SUBTYPE: Marine

Descriptive Incident:
DATE: April 27, 1923
LOCATION: Off Genovesa Isle, Galápagos Islands, Ecuador
WITNESS: William Beebe

Naturalist William Beebe was aboard the research vessel *Noma*, heading toward the small island of Genovesa (also known as Tower Island) in the Galápagos, when he observed a large devil ray on April 27, 1923. He quickly made a sketch and wrote down a description of the encounter, which was published a year later.

Beebe noted it was a few minutes after six, and he was standing forward close to the starboard rail. Along with others on the boat, he saw "a very large ray or devil-fish" strike a blow to his yacht and then skip along the surface. Beebe quickly noted the color and pattern of the animal, and then verified his sketch with the observations of his companions.

Beebe's description is detailed:

> *From tip to tip of [the] wings it was at least ten feet, of somewhat the usual manta or devil-fish shape, except that the wings were not noticeably concave behind, and the lateral angles were not acute. The cephalic horn-like structures were conspicuous and more straight than incurved. In general the back was dark brown, faintly mottled, while the most conspicuous character was a pair of broad, pure white bands extending halfway down the back from each side of the head. The wing tips also shaded abruptly into pure white.*

In 1996, Gunter G. Sehm, a German historian, published a formal paper in *Cryptozoology* on what he called "Beebe's Manta." He proposed that Beebe's Manta be accepted as an unknown species of giant devil ray, *Manta* sp. He speculated that it fit well within the evidence for such rays and was distinguished by a dorsal color pattern of symmetrical V-shaped areas of brilliant white bands and a rather short tail.

Sources: William Beebe, *Galápagos, World's End* (New York: G. P. Putnam's Sons, 1924), p. 312; Gunter G. Sehm, "On a Possible Unknown Species of Giant Devil Ray, *Manta* sp.," *Cryptozoology* 12, 1996.

Great Sea Centipede

PHYSICAL CHARACTERISTICS

This unique marine animal is generally quite large, 30 to 60 feet in length, with a relatively thin neck. Its body may be segmented, and it displays lateral projections, plates, or fins that stick out prominently from its sides. This animal routinely spouts what appears to be water vapor from its nose or mouth area. This visible breath is one of the diagnostic features of this kind of Sea Serpent.

Zoologist Bernard Heuvelmans called this type the Many-finned, and he noted that its many lateral fins and its segmented, jointed armor of bony dermal plaques "were common among archaic whales." The multiple fins have been reported in a variety of configurations, and Heuvelmans points out that the rigid nature of the animal may cause the fins to be seen from different angles when the animal turns radically. Because of the animal's movement, therefore, these triangular fins can give an appearance of a massive jagged crest when the cryptid is swimming on its side.

The *observed* number of "fins" varies, but does the *actual* number? The archaic ziphiids, a kind of whale that might be distantly related to the Great Sea Centipede, had specialized "flipper pockets," slight depressions in the body wall into which its flippers could be tucked. If a series of these exist on the Great Sea Centipede, the count of side fins or flippers could vary depending on the observer's viewing angle.

We have renamed Heuvelmans's Many-finned the Great Sea Centipede, which harks back to the original—and more appropriate—Roman name for these kinds of creatures, for which some ancient reports exist.

RANGE

Heuvelmans said that this type is found only in tropical and subtropical waters. A close study of the distribution of sightings appears to confirm a restricted range for this tropical marine animal, from south of Asia to Arabia, at 15 degrees north latitude, to 15 degrees south latitude near Madagascar, with only a few reports coming from outside of the normal range. A specific, well-documented population has historically been reported from the South China Sea off old Indochina, west to the Gulf of Aden. Reports from Madagascar and sightings in the Mediterranean Sea reinforce the restrictions of this type to the world's warmer marine environs.

HISTORY

The first modern discussion of these animals took place in the sixteenth-century work *L'Histoire entiere des poissons,* by the Father of Ichthyology, Guillaume Rondelet. What he called the "cetacean centipede" had "a multitude of feet," the "oars with which it propels itself." This cetacean was seen frequently in the Indies, according to Rondelet. He noted that the first person to describe the animal was Aelian, a Greek military writer who lived in Rome during the second century. In his book, *On the Nature of Animals,* Aelian called this creature the "Great Sea-Centipede" and described how it sometimes beached and how witnesses would describe its lobster-like tail and the hairs of its large nostrils.

Several excellent nineteenth-century reports of this creature exist in the literature. The details of one sighting appeared in the *Illustrated London News* in the form of a letter from Edmund J. Wheeler, who was quoting from the log book of his company's ship, *Princess,* which had recently returned from China. At 1 P.M. on July 8, 1856, when rounding South Africa (latitude 34° 56' S, longitude 18° 14' E), the *Princess*'s captain, A. R. N. Tremearne, saw a "large fish, with a head like a walrus, and twelve fins," six on each side. The creature, which had a great tail, measured some 20 to 30 feet in length and was spouting something from its mouth. The *Princess*'s crew fired on it and felt that they had hit it around the head.

Commander Hugh L. Pearson, captain of the Royal Yacht, and his lieutenant, W. P. Haynes, both of the HMS *Osborne,* cited in an official report to the Admiralty that they had seen a Sea Monster, but not one that was serpent-like. It occurred off Cape Vito, near the north coast of Sicily, on May 2, 1877. Remarkably, the 30-foot-long animal displayed a long row of fins, which appear to have been sticking out from the side of the animal. As they drew closer to the creature, a head with a smoothness down its back "like a seal" and front flippers became visible.

The following year, another sighting occurred. A witness told an investigator that what she saw looked exactly like what the witnesses aboard the *Osborne* had seen. In December 1878, an Englishwoman named Mrs. Turner was aboard the P & O liner *Poonah*, anchored off Suez or Aden (she could not remember which) at the Gulf of Aden, Indochina (now Vietnam) when she saw the creature. She related her experience to geologist Robert Phillips Greg, who subsequently wrote a letter to biologist A. C. Oudemans. What he said she saw, a mere 150 feet away, was a strange animal, motionless on the surface. Greg relayed, "She saw both the head and 7 or 8 fins of the back, all at the same time in a line. She cannot remember exactly how many dorsal fins there were, but they were large, slightly curved back and not all the same size. . . . The head looked 4–6 feet diameter, like a large tree trunk. . . . The color was nearly black like a whale. The whole length appeared considerable, perhaps as long as an ordinary tree, or moderate sized ship!"

Most sightings of the Great Sea Centipede come from Indochina and were recorded by the French from the 1890s through the early 1900s as ships from France and other countries were opening the markets off the South China Sea. A stranding of one of these animals was recorded in 1883 (see case, pages 157–158). Good sightings of Many-finned creatures occurred off of Indochina in 1893, 1896, 1898, 1902, 1903, 1904, and 1908. Sightings near Somalia occurred in 1923 and 1928, and near Madagascar in 1926. It should come as no surprise, then, that in the 1920s, Armand Krempf, director of the Oceanographic and Fisheries Service of Indo-China, formally considered these animals to be real and part of the zoological sphere to be described and collected. Heuvelmans's view was that this Vietnamese cryptid was the prototype for the Oriental dragon.

More recent sightings are rare, but one report of a Sea Serpent seen near Hong Kong by Chinese students in the late 1960s suggests that the creature still exists.

CANDIDATE

Dermal plates, an evolutionary adaptation for aquatic environments, are found in the present-day sturgeon (Chondrostei), the seahorse (Teleostei), and the armored catfish (Teleostei, Loricariidae, *Hypoptopoma*). Even the 65-million-year-old coelacanth possesses a form of dermal plating. But did ancient whales have dermal plating?

Zoologist Bernard Heuvelmans thought that convergent evolution could have produced some ancient whales with armored dermal plating. Consequently, he designated this animal and its relatives, the *Cetioscolopendra aeliani* ("Aelian's cetacean centipede"). Heuvelmans believed that it may have evolved from the *Basilosaurus,* an Archaeoceti whale from the Eocene Epoch, 50 million years ago. This snake-like whale had 44 teeth in its long jaws. It was about 65 feet long, and had small hind legs and a reduced pelvis.

Heuvelmans noted that a few dermal scutes, or external bony plates, had been discovered along with one basilosaur fossil, and some amorphous rounded lumps had been linked to a fossil squalodont (a primitive toothed whale) as well. Both finds were interpreted as evidence that primitive cetaceans were "armored." However, in private correspondence in 2002, British paleontologist Darren Naish reports that the basilosaur scutes were actually from a leathery turtle and the squalodont "lumps" were either petrified wood or unidentifiable. No evidence of dermal plating, therefore, exists for cetaceans, extant or extinct.

Due to this lack of precedent, rarity of good sightings, and limited range, most cryptozoologists today feel that the Great Sea Centipede is one of the least likely types of Sea Serpents. But what if the Great Sea Centipede only looks *as if* it has plates? What if the plates are actually disease-related barnacles and characteristics of the skin not recorded in the fossil record?

Yet another possibility may exist, of course. The lateral "plates" may not be plates at all, but merely flippers or fins held near the body. Perhaps these lateral flippers aid in heat dispersal. The Great Sea Centipede may have adapted to its warm-water environment with body attachments that helped keep the animals cool.

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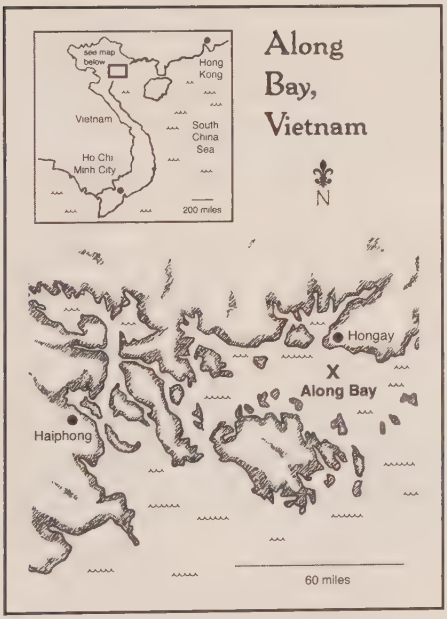


TYPE:
Great Sea Centipede

Descriptive Incident:
DATE: 1883
LOCATION: Hongay, Along Bay, Vietnam
WITNESS: Tran Van Con

Con rit is Vietnamese for "centipede," a name applied to a special form of Sea Serpent found in the oceans off Southeast Asia.

Armand Krempf, a French doctor and the founder and director of the Oceanographic and Fisheries Service of Indo-China, con-

ducted initial research on the *Con rit* in the 1920s. One eyewitness he interviewed was a 56-year-old Annamite native, Tran Van Con, who reportedly touched a beached *con rit* in 1883.

The body, found without a head, measured 60 feet long and 3 feet wide. Dark brown above and light yellow below, the animal had regular armored segments every 2 feet along its body (thus its centipede name). The segments, when struck with a stick, rang "like sheet-metal." It also had a pair of appendages 2 feet, 4 inches long.

The stench from this putrefying mass was such that no one would approach it. The remains were eventually towed out to sea and sunk.

Krempf managed to verify the plausibility of this *con rit* story several years later, when he asked Saigon Immigration authorities to question some Chinese fishermen, who described the *con rit* much as Tran Van Con had.

The *con rit* is likely the dragon of ancient Vietnamese legends, where an animal seen in the Gulf of Tonkin is described as fabulously long "like a centipede."

Source: A. Krempf, "Carcass on coast of Annam, 1883," in Abel Gruvel, *L'Indochine, Ses richesses marines et fluviales, Exploitation actuelle. Avenir,* Paris: Société d'Editions Géographiques, Maritimes et Coloniales, 1925, p. 123.

TYPE:

Great Sea Centipede

Descriptive Incident:

DATE: May 21, 1899

LOCATION: Cape Falcon, Algeria

WITNESSES: Lieutenant Boothby, several sailors

While cruising the Mediterranean near Cape Falcon, Algeria, sailors aboard the HMS *Narcissus* observed a creature that they said was 150 feet long.

Lieutenant Boothby was on watch at 5 A.M. when he saw a "Sea Monster" from the port bow. He wrote in the log that it was "propelled by large fins, and lying very low in the water." The sailors observed the creature for 30 minutes.

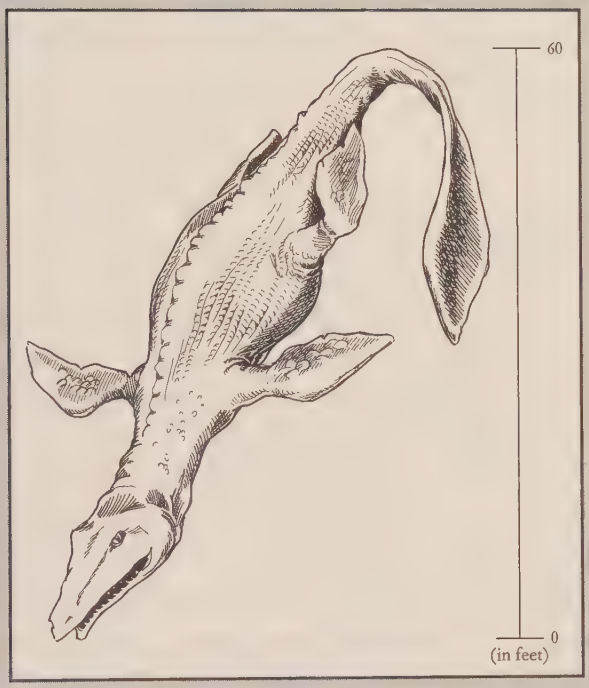
A London newspaper reporter later asked one of the sailors if what he had seen could have been a line of porpoises. The sailor replied that they had seen "some porpoises just after and their motion was not the same. You could see the porpoises jump and tumble over, but this creature lay steadily on the surface, gently gliding through the water."

The signalman onboard reported that the monster was "propelled by an immense number of fins." This method of propulsion

allowed the creature to keep up with the ship. He noticed that the fins, which turned over and over, were present on both sides of the animal all the way to the tail. The fins kicked up so much water that no one could see its head.

Curiously, one witness recalled that the animal "spouted up water like a whale, only the spouts were very small and came from various parts of the body." Zoologist Heuvelmans speculates that these spouts were likely "splashes raised by rows of fins along the sides."

Sources: Bernard Heuvelmans, *In the Wake of the Sea-Serpents* (New York: Hill and Wang, 1965, 1968); "Sea Serpent at it Again." *Daily Mail*, London, May 31, 1899.



Mystery Saurian

PHYSICAL CHARACTERISTICS

Marine sightings involve a creature that looks like "an alligator of enormous length," or a scaled creature with the "head of an alligator." It has a body shaped like a crocodile with extended frame, scaly outer covering, elongated head and muzzle. The freshwater sightings involve apparently common alligators and crocodiles.

RANGE

The marine subtype is found in the Bay of Bengal, the Oman Sea, the North Sea, and tropical waters. The freshwater subtype is found in rivers and lakes well outside the normal range of crocodiles and alligators.

HISTORY

The unknown can only be recognized within the context of the known. Here is what is known. Crocodilians—an ancient family of reptiles that existed before the time of the dinosaurs—includes three groups: the alligators (which includes alligators and caimans), the crocodiles, and the gharials, the members of which have a very distinctive long, narrow nose and are today found only in India.

Alligators, which are normally 6 to 12 feet in length, are found only in the southeastern United States and in some parts of China. The American and Chinese alligators are cold-tolerant and are found in the highest latitudes of any crocodilian species. The Chinese alligators live near the lower Yangzi River in the Anhui province of China, which is exactly on the 30° F North latitude, parallel with the Florida habitat of the American alligator. But the American alligators are also found as far north as the 35° F latitude, in North Carolina.

Crocodiles, of which there are 23 recognized living species, are found in more than 90 countries and islands around the world. Crocodiles grow to be as long as 23 feet, and inhabit the tropics, as they are unable to survive and reproduce successfully in cold climates. Some saltwater crocodiles *(Crocodylus porosus)* do exist, but their range is limited to the Pacific Ocean from the East Indies and the Malay Archipelago to the Fiji Islands.

The existence of these saltwater crocodilians can hardly explain the persistent reports of the Mystery Saurian from the mid-Atlantic Ocean and the North Sea, where sightings go back more than a cen-

tury. On October 20, 1877, for instance, Captain W. H. Nelson, while aboard the *Sacramento* in the mid-Atlantic, saw a scaled creature with the head of an alligator.

Admittedly, there are few good reports of this type, first called Marine Saurian in the 1960s by Heuvelmans, who believed that a large lizard- or crocodile-shaped creature had been encountered in tropical waters or warm, summertime waters of the Atlantic.

But Heuvelmans seems to have disregarded the reports of out-of-place freshwater crocodilians. As critic Ulrich Magin has pointed out, some witnesses have described the creatures seen in Loch Ness, for example, as gigantic "alligators," "crocodiles," and even as "salamanders." To regard all Loch Ness reports as sightings of a classic Long-necked creature has led researchers into ignoring the more crocodilian accounts that exist at the loch and at other freshwater sites.

Additionally, we have the problem of "escaped crocs." Every year, in various freshwater rivers and lakes around the globe, people report seeing alligators or crocodiles that are probably out-of-place, discarded pets. When these reports involve escaped animals, capture is routine. When it doesn't, something else seems to be involved.

CANDIDATES

According to Heuvelmans, the marine reports of this animal may be of a surviving relict population of thalattosuchian, a true oceanic crocodile that lived from the Jurassic to the Cretaceous periods, more than 65 million years ago. Heuvelmans thought that perhaps they had survived into the present, as they were designed for deep diving and thus may have remained unseen.

But English paleontologist Darren Naish calls Heuvelmans's marine crocodile proposal "extraordinarily implausible." He notes that marine crocodiles have a good fossil record, and there are no fossil examples after their extinction in the Lower Cretaceous. Naish

is also critical of a theory by Fortean cryptozoologist Richard Freeman that these reports could be due to extremely large and very out-of-place populations of saltwater crocodilians, *Crocodylus*.

To explain the out-of-place *freshwater* sightings, cryptozoologist Mark A. Hall, who examined some nineteenth-century reports from the Midwestern United States, theorized that these could be due to a surviving prehistoric giant crocodilian. Another candidate for the freshwater sightings is the *Champsosaurus*, an extinct crocodile-like reptile that grew to be five to eight feet long. These creatures, with their long, narrow snout lined with small and sharply pointed teeth, lived in rivers and swamps and fed primarily on a diet of fish. However, we speculate that most modern incidents are of overgrown crocodilian pets that have escaped or been released. Nevertheless, they remain cryptids, truly unknown animals, until they are captured and zoologically identified.

TYPE:
Mystery Saurian

SUBTYPE: Marine

Descriptive Incident:
DATE: July 30, 1915
LOCATION: North Sea, North Atlantic
WITNESSES: Kapitanleutnant Freiherr (Baron) von Forstner and the crew of *U-28*

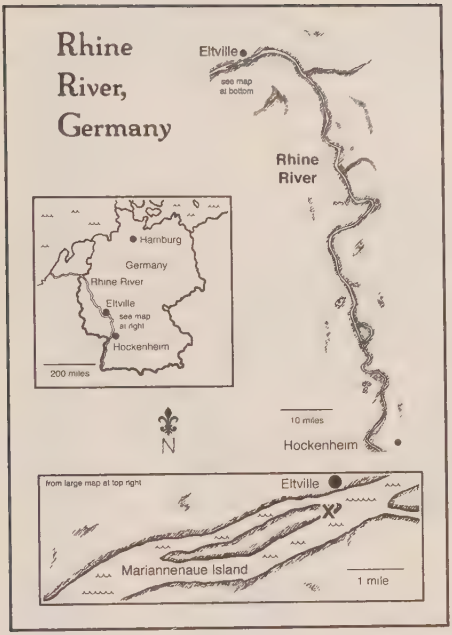
On the evening of July 30, 1915, the Unterseeboot-Achtundzwanzig (German for "submarine twenty-eight") was on patrol in the North Sea between the Irish and Scottish coasts. Sighting an enemy ship, the *U-28* launched a torpedo that hit the *Iberian*. The British ship went down rapidly, stern first. But a large explosion that sent water and wreckage a hundred feet into the air also threw a "gigantic sea animal" to the surface. Kapitanleutnant Freiherr (Baron) von Forstner, who was in the conning tower with his men at the time, saw the animal for a few seconds before it sank.

Writing in the ship's log, the German captain reported, "There was a violent explosion, 25 seconds after the Iberian went under, and a few seconds later, a gigantic sea monster was hurled, writhing and struggling, around 30 meters [100 feet] into the air. The monster was around 20 meters [66 feet] long, shaped like a crocodile. His head was long and pointed; he had four legs terminating in big fins.

He remained above water for around 5 seconds, so there was no time to photograph him. Three other officers saw him."

When von Forstner's report appeared in the German newspaper *Deutsche Allgemeine Zeitung* in 1933, another U-boat captain, Kapitanleutnant Werner-Lowisch, came forward and told the *Bremer Nachrichten* that at 10 P.M. on July 28, 1918, in the North Sea, he and another crew member of the *U-109* saw a creature with a long head, scales like a crocodile's, and legs with distinct feet. The animal was about 100 feet long.

Sources: Freiherr von Forstner, "Das schottische Seeungeheuer schon von *U-28* gesichtet," *Deutsche Allgemeine Zeitung*, Tübingen, December 19, 1933; Bernard Heuvelmans, *In the Wake of the Sea-Serpents* (New York: Hill and Wang, 1968), pp. 395-396, 400; Log entry: http://www.ufoinfo.com/roundup/v04/rnd04_18.html



TYPE:
MYSTERY SAURIAN

SUBTYPE: Freshwater

Descriptive Incident:
DATE: June 22 to July 3, 2001
LOCATION: Rhine River, Germany
WITNESSES: cyclist, barge captain

FROM THE END OF JUNE INTO JULY 2001, AUTHORITIES hunted a five-foot-long "crocodile" that people were seeing in the German Rhine. At that time of year, the Rhine is teeming with fish and waterfowl and offers an ideal hunting ground for a large carnivorous reptile.

The crocodile was first spotted in the river on Friday, June 22, at Hockenheim, in the Baden-Wuerttemberg state. The first to report the crocodile was a cyclist, who claimed to have disturbed it when he entered some bushes to urinate.

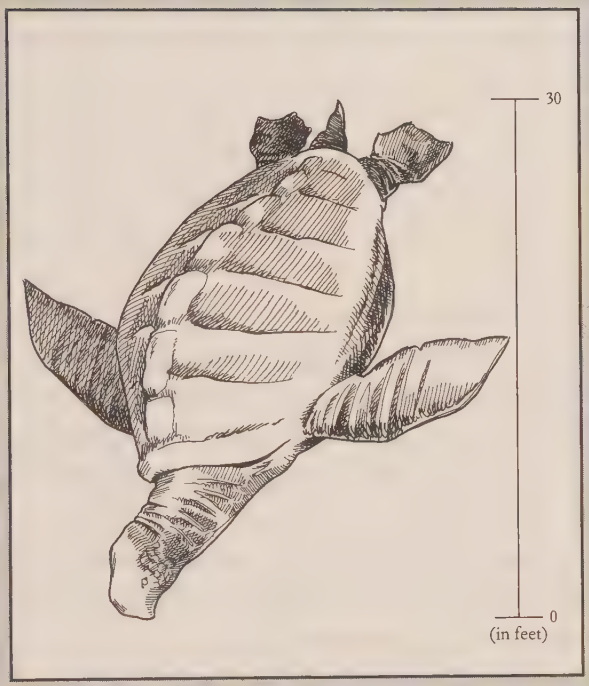
The crocodile was seen again on June 23rd and June 25th at Eltville, near Wiesbaden. "The captain of a barge saw what he thought at first was a floating log," said Christof Schulze, head of Eltville's forestry office. "But he alerted police when he saw the log swim across the river." The barge captain estimated that the animal was five feet long. Police launched a helicopter search.

On Tuesday, June 26th, the crocodile was spotted on land, on Mariannenaue Island. This was not a copycat report, as the first news reports of the creature did not hit the media until the 27th of June.

On Monday, July 2nd, the hunt for the crocodile was abandoned and the ban on swimming was lifted. But the hunt was resumed the next day after a crocodile was seen surfacing and swimming near a small boat. When a fake rubber dummy gator was found upriver from these reports, Norbert Huebscher of the Wiesbadener Water Police said, "We are looking at the possibility that someone has been having us on."

But three days later, another police spokesman reported that "We're still looking for the real crocodile. We've had believable sightings." In the end, however, no crocodile or other creature was ever captured.

Sources: "Rhine river crocodile eludes police," Ananova News Service, June 27, 2001; "Police Step Up Search for Crocodile," Reuters News Service, June 29, 2001; "Police abandon 'wild goose chase' for croc in Rhine," Ananova News Service, July 2, 2001; "Rhine 'crocodile' spotted again," Ananova News Service, July 3, 2001; "Worried police catch rubber crocodile in Rhine," Ananova News Service, July 5, 2001; "Police Hunt Rhine Crocodile After Wooden Hoax," Reuters News Service, July 5, 2001.



Cryptid Chelonian

PHYSICAL CHARACTERISTICS

Witnesses describe the Cryptid Chelonian as looking like a gargantuan turtle with characteristic turtle-like features. These include a very wide mouth that splits the head in two when open, large prominent eyes, and large scales on the back.

Cryptid Chelonians are considerably larger than the known giant turtles—including the Hawaiian green turtles, Atlantic green

turtles, Kemp's ridley turtles, loggerhead turtles, hawksbill turtles, and leatherback turtles. The largest marine turtle ever recorded, a 9-foot-long, 2,000-pound male leatherback, washed up at Harlech, Wales, in 1988 after becoming entangled in fishing gear. Some marine "Sea Serpent" reports actually seem to be describing an extremely large Cryptid Chelonian some 30 to 45 feet in length. These dimensions exceed even those of *Archelon ischyros,* the largest turtle ever to live. This Cretaceous Period sea turtle reached lengths of up to 13 feet.

Cryptid Chelonians have also been reported in freshwater. These are smaller than the marine Cryptid Chelonians and may actually be extraordinarily large known freshwater forms. The largest known freshwater turtle is the alligator snapping turtle *(Macrochelys temminckii)*. They can grow to a carapace length of 26 inches and weigh up to 176 pounds, though the largest individual on record is a 236-pounder in the Brookfield Zoo, Chicago. A snapper skeleton in White Springs, Florida, had a carapace length of 31 inches and weighed more than 200 pounds in life.

Reports of the Cryptid Chelonian are rare.

RANGE

Cryptid Chelonians appear to live, for the most part, in temperate waters.

HISTORY

In the third century, Aelian wrote: "This sea [the Indian Ocean] produces monstrous turtles, the shells of which can be used as roofs." In 1154, referring to turtles in the same region, in the sea of Herkend, near Sri Lanka, Al Edrisi in his *Geography* mentioned that he had seen turtles 30 feet long. He claimed that these turtles had laid as many as a thousand eggs apiece.

When confronted with these ancient texts and a few modern re-

ports, zoologist Heuvelmans named this type the Father-of-all-the-turtles, borrowing a name from a Sumatran folktale, which he thought referred to a giant turtle that witnesses sometimes mistake for a Sea Serpent.

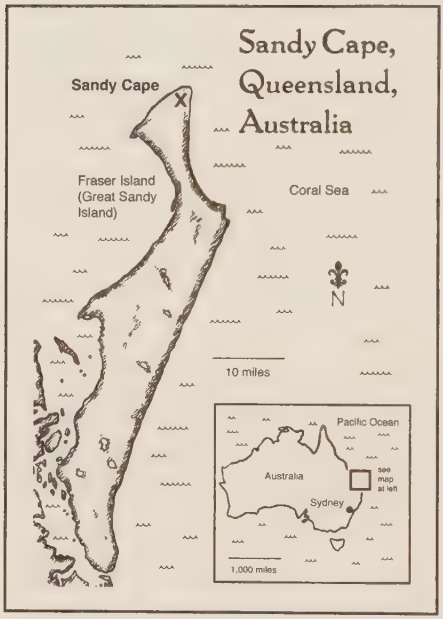
Critics claim that reports of the Cryptid Chelonian are merely misidentifications of known turtles seen by individuals unfamiliar with their existence in those locales.

CANDIDATES

One obvious candidate for the Cryptid Chelonian of the oceans is the prehistoric sea turtle, *Archelon ischyros,* which measured 12 to 15 feet long and 25 feet around. This is the largest turtle ever to exist. Known from fossilized remains found in the plains of South Dakota, this giant lived about 70 million years ago, during the Cretaceous Period.

Another viable candidate, because it is so widespread, is Hoffmann's giant turtle *(Allopleuron hofmanni)*. Hoffmann's is known as a "hero turtle" because it is a "hero of evolution," a true survivor that showed great success. This Upper Cretaceous turtle often reached lengths of more than six feet. The Natuurhistorisch Museum of Bosquertplein in the Netherlands, which has exhibited this species, notes on its website: "While of other turtle species only few specimens are known to date, of Hoffmann's turtle hundreds of remains have been found, amongst which a number of almost complete skeletons. . . . Since Hoffmann's giant turtle is the only species of which a larger number of specimens have been found, its mode of life is sufficiently well known."

A possible freshwater candidate for the Cryptid Chelonian is *Stupendemys,* the largest freshwater turtle ever to have existed. The broad, heavy shell that covered its back was more than six feet long. Its heavy weight allowed it to stay submerged for long periods in order to eat the large quantities of weeds that it needed to survive.



TYPE:
Cryptid Chelonian

SUBTYPE: Marine

Descriptive Incident:

DATE: June 1890

LOCATION: Sandy Cape, Great Sandy Island, Australia

WITNESSES: Miss S. Lovell, local residents, Aborigines

While walking on Queenland's Sandy Island Beach, a schoolteacher known only as Miss S. Lovell came across an animal she did not recognize. She described the animal, which remained onshore just five feet from her for about half an hour, as half fish, half tortoise, and about 27 to 30 feet long. Its body consisted of a dome-shaped carapace, smooth and slate-gray in color. The tail, which was about 12 feet long, had a chocolate-brown tail fin. The head and neck were greenish white, and a band of white circled very black eyes and went around the upper and lower jaws. There seemed to be white spots on the neck.

When Miss Lovell showed the sketch she had drawn of the creature to the local Aborigines, they immediately recognized it as an animal they knew as the *moha moha*, and commented, "Saucy Fellow, Meebee," which means, in English, "dangerous turtle." Apparently, the creature had been invading the Aborigines' camp and

attacking them for eight years, forcing them to camp inland. Miss Lovell saw the creature on subsequent occasions, as did Sandy Cape lighthouse workers, other local residents, and a young Aboriginal boy.

The editor of the Australian natural-history magazine *Land and Water* was skeptical of Miss Lovell's account. In a correspondence that ensued, Miss Lovell submitted increasingly defensive letters, as well as more refined drawings. Nevertheless, she was not taken seriously, and the editor and other correspondents to the magazine were convinced that she had seen nothing more than a 20-inch turtle. But Miss Lovell stood firm, saying that the animal she saw was much larger.

At the time, William Saville-Kent, then assistant curator of the London (Australia) Natural History Museum, was in the midst of writing a book on the fauna of the area. He contacted Miss Lovell and investigated the case. Saville-Kent favorably reported the case in *The Great Barrier Reef of Australia*, published in 1893, even giving the animal its own official scientific name, *Chelosauria lovelli* (Miss Lovell's tortoise lizard).

Rupert T. Gould, in *The Case for the Sea-Serpent*, published in 1930, also thought highly of the incident and devoted an entire chapter to it. "Miss Lovell seems to have had an almost unique experience," wrote Gould, "and to have done her best to describe it in detail—perhaps a little too much detail. . . . But I cannot think that, whatever her deductions, she was mistaken in what she actually observed—nor do I think that her report was quite fairly treated, in scientific or quasi-scientific circles, on its original appearances."

On the other hand, Bernard Heuvelmans, in reviewing the case in his 1968 book, *In the Wake of the Sea-Serpent*, called Miss Lovell "an arrant liar, and a bad liar at that, since the different versions of her tale are a tissue of contradictions and absurdities. It is evidence not of zoological fact but of psychotic behavior. . . ." He then went

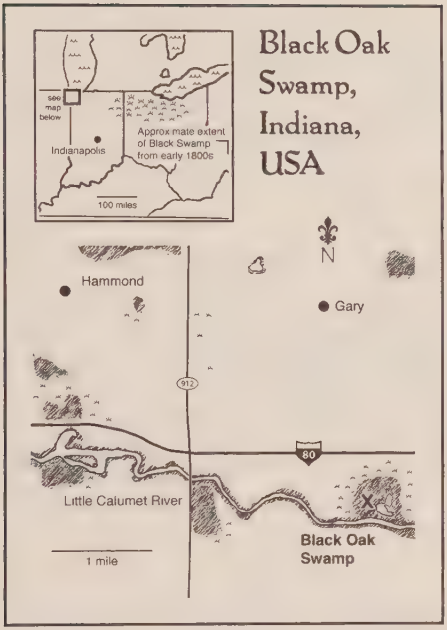
on to say: "I find it hard to believe that Miss Lovell was not a dotty old maid who had picked up, but not digested, a smattering of paleontology and Brahmin legend."

More recently, the Australian scientist and journalist Rosaleen Love took a new look (in her book *Reefscape,* published in 2001) at Miss Lovell's case from a modern scientific and feminist point of view. Noting Heuvelmans's harsh take on the witness, she wrote in chapter 5, "Reefscape with Sea Serpents": "Just as well Miss Lovell was long dead and didn't get to read this version of her story. The testimony of old maids joins the testimony of blacks as unreliable. There are important race and gender issues in Sea Serpent spotting."

Love is intrigued by the fact that in the new science of cryptozoology proposed by Heuvelmans, where "input into zoology from local, indigenous, explorer, and traveler traditions, sightings, tales, and legends of as yet unverified animals" are important, Heuvelmans has "rejected the Sea Serpent of the Great Barrier Reef. . . . If only William Saville-Kent had been there to take its photograph."

Today, the *moha moha* is Australia's most famous Sea Serpent.

Sources: Rupert T. Gould, *The Case for the Sea Serpent* (London: Philip Allan, 1930), pp. 173–83; Bernard Heuvelmans, *In the Wake of the Sea-Serpents* (New York: Hill and Wang, 1968), pp. 295–302; Rosaleen Love, *Reefscape: Reflections on the Great Barrier Reef* (Washington, D.C.: Joseph Henry Press/National Academies Press, 2001), pp. 97–111.



TYPE:
Cryptid Chelonian

SUBTYPE: Freshwater

Descriptive Incident:
DATE: July 1950
LOCATION: Black Oak, Indiana
WITNESSES: Samuel E. Brownsten and Henry Ewen

In July 1950, Lake County surveyor Samuel E. Brownsten and farmer Henry "Potato King" Ewen were draining one of four swamps at Black Oak, near Hammond, to convert it to farmland. The two men made an opening into the Little Calumet River through a culvert 30 inches wide. Soon, the drain was clogged with frogs and fish, and as the men tried to unplug it, they noticed something bigger. "We saw a turtle," Brownsten reported. "Its head was as big as a human's."

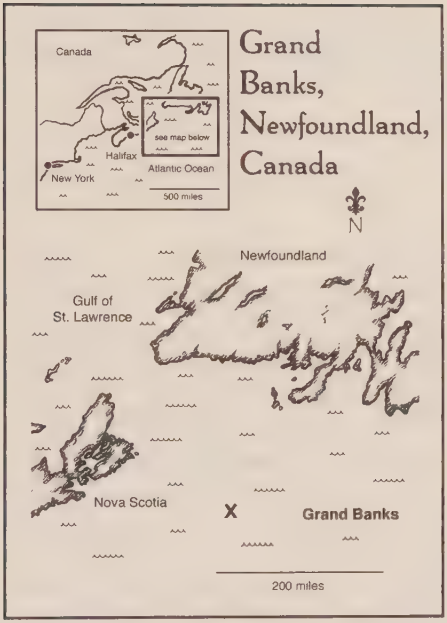
Ewen added: "It was too big to even get into the 30-inch drain. I tried to help it. I pushed on its shell, but man, when I saw the size of that thing, I knew I didn't want to tangle with it. It was as big as a beer barrel."

In *Natural Mysteries,* Mark A. Hall takes note of reports of another Cryptid Chelonian seen nearby in Indiana. Churubusco, which is near Fort Wayne, has been the home for almost 60 years of a

legendary giant turtle with the affectionate nickname "Oscar, the Beast of 'Busco." The turtle allegedly lives in Falk Lake. Over the years, many hunters have tried to catch it, without success. Oscar is said to have the circumference of a dining-room table and to weigh between 100 and 500 pounds. A spate of sightings in 1949 attracted national press attention.

Hall speculates that the draining of swamps across the South and Midwest destroyed the habitat of many old, large turtles, forcing them to move closer and closer to human communities. While their reported sizes sound extraordinary, they are well within the range of those associated with the alligator snapping turtle *(Macrochelys temminckii)*. These giant turtles routinely measure up to 200 pounds, and one individual, found in 1937 in Kansas in the Neosho River, weighed 403 pounds.

Source: "Giant Turtle?" *Indianapolis News,* Indianapolis, Indiana, July 15, 1950; Mark A. Hall, *Natural Mysteries* (Bloomington, MN: MAHP, 1989), pp. 20–22.



TYPE:
Cryptid Chelonian

SUBTYPE: Marine

Descriptive Incident:
DATE: June 1956 and earlier
LOCATION: Newfoundland–Nova Scotia
WITNESSES: Crews of the *Annie E. Hall* and *Rhapsody*

In June of 1956, the crew of the steamer *Rhapsody* was near Nova Scotia when they reportedly encountered an enormous white-shelled turtle. The creature, which measured 45 feet long and had 15-foot-long flippers, raised its head all of eight feet out of the water. Crew members had the Canadian Coast Guard warn away local boats.

The waters off Newfoundland and Nova Scotia, which have a long history of kraken (giant squid) encounters, may be a haven for these grand ocean-going turtles. On March 30, 1883, the schooner *Annie E. Hall* was off Newfoundland's Grand Bank when the crew spotted what they at first thought was an overturned ship. But the "ship" turned out to be a giant turtle, very much alive. It was said to be 30 feet wide and 40 feet long, and seemed to have 20-foot-long flippers.

Sources: "Ship Reports Giant Sea Turtle," *New York Herald Tribune,* New York, June 8, 1956; Karl Shuker, *In Search of Prehistoric Survivors* (London: Blandford, 1996), p. 119.

TYPE:
CRYPTID CHELONIAN

SUBTYPE: Marine

Descriptive Incident:
DATE: September 13, 1959
LOCATION: Soay Island, Scotland
WITNESSES: Tex Geddes and James Gavin

IN THE 1950S, TEX GEDDES RAN A BASKING SHARK fishery from Soay, a tiny island off the west coast of Scotland. On September 13, 1959, Geddes set off to do some mackerel fishing when he spied James Gavin, a keen fisherman on vacation at Soay, sitting on some rocks and invited Gavin to come along.

The day and sea were calm; visibility was excellent. After watching some killer whales and a basking shark, Gavin noticed a dark

shape about two miles away, with the Skye shore in the background. The shape was riding higher in the water than the whales and sharks, and acting quite differently. Before they knew it, the thing was heading for them. It came so close that they heard it breathing.

Geddes described the creature this way:

> *The head was definitely reptilian, about two feet six inches high with large protruding eyes. There were no visible nasal organs, but a large red gash of a mouth which seemed to cut the head in half and which appeared to have distinct lips. There was at least two feet of clear water behind the neck, less than a foot of which we could see, and the creature's back, which rose sharply to its highest point some three to four feet out of the water and fell away gradually towards the after end. I would say we saw 8 to 10 ft. of back on the water line.*

The back had a saw-toothed edge, the head was scaly, and no teeth were visible in its mouth.

Although it looked nothing like a serpent, this is one of the more famous sightings of a Sea Serpent, and today it is referred to as the "Soay Beast" sighting. The eyewitnesses were credible observers, very familiar with all types of sea life, and were questioned deeply about their report by Maurice Burton, one of the more skeptical naturalists of the day. In an in-depth article published in the *Illustrated London News,* Burton showed two drawings by the witnesses: an artist's reconstruction and, for comparison, an illustration of the serrated ridge of a similar creature seen north of Sicily by the Royal Yacht *Osborne* in 1877.

Burton dismissed speculation that the sighting was merely an extraordinarily large leatherback turtle; the Soay Beast was quite different in many respects. Years later, zoologist Heuvelmans would

regard this case as a cornerstone of his Father-of-all-the-turtles classification. Today, critic Ulrich Magin and skeptic Darren Naish discount the Soay Beast as a leatherback or Kemp's ridley turtle.

A year after his encounter, Tex Geddes briefly mentioned his sighting in his 1960 book, *Hebridean Sharker.* But since he had described the encounter in detail in letters to Maurice Burton, the issue of the sighting was not of much import in the book.

It's worth noting that the year after the Soay Beast sighting, Tex Geddes's very good friend Gavin Maxwell would become internationally famous for his writings on his beloved Soay. His well-known first book, *Ring of Bright Water,* published in 1960, concerns Maxwell's devotion to Scotland, Soay, and his other friends. Less well known is his 1952 tome, *Harpoon at Venture,* about the rough day-to-day life of Tex Geddes and others who were at the mercy of the sea doing commercial shark fishing from Soay. Interestingly, Maxwell owned Soay from 1946 until his death in 1969, and then Geddes owned Soay until he died in 1996. One wonders if "James Gavin," the other witness to the Soay Beast, might not have been a pseudonym for Gavin Maxwell, who perhaps wished to stay out of the limelight surrounding the controversial sighting.

Source: Maurice Burton, "The Soay Beast," *Illustrated London News,* London, June 4, 1960; Maurice Burton, "Was the Soay Beast a Tourist?" *Illustrated London News,* October 14, 1961; Tex Geddes, *Hebridean Sharker* (London: Herbert Jenkins, 1960).

TYPE:
Cryptid Chelonian

SUBTYPE: Freshwater

Descriptive Incident:

DATES: March 2 and 14, 2002; March 24, 1998; December 1996

LOCATION: Hoan Kiem Lake, Hanoi, Vietnam

WITNESSES: Dong Hai Anh, Luu Thi Thuy, and hundreds of others

On Tuesday, March 14, 2002, local residents and visitors to Hanoi's Hoan Kiem Lake were treated to a rare visit by one of the legendary Vietnamese turtles that are said to inhabit this large body of water.

The creature, a 6½-foot long, 400-pound, apparently soft-shelled turtle surfaced from the murky depths of the downtown lake and delighted hundreds. Lucky onlookers crowded the west banks of the lake near the aptly named Turtle Tower islet, where the reptile crawled out of the muck to do a bit of sunbathing, according to a witness named Dong Hai Anh.

"This is the first time since 1993 that people saw such a huge turtle show its whole body outside the water," said Ha Dinh Duc of Hanoi National University, who has been studying the turtles for the past decade. He has records of more than 30 sightings of the creatures since 1991.

Less than two weeks earlier, at 1:30 P.M. on March 2, 2002, a few dozen excited bystanders, including 33-year-old Luu Thi Thuy, saw a turtle bob its head out of the water for about 15 minutes.

"The Hoan Kiem turtle is the world's biggest freshwater turtle," says Ha Dinh Duc. Much remains unknown about these turtles living in the center of downtown Hanoi—their number, their reproductive ability, their origins, and especially, the question of whether they're unique to the lake. Although there are no DNA or tissue samples on hand to verify its existence, the Hoan Kiem turtle is thought to be a distinct species, which Duc has named *Rafetus leloii*, in honor of the emperor whose name is attached to the lake.

Hoan Kiem Lake is the site of Vietnam's most enduring legend, which recounts the story of an emperor, Le Loi, who in 1418 called on the heavens for help in resisting the Chinese invaders. Answering the call was a huge tortoise, which rose from the lake and provided Le Loi with a golden sword to repel the Chinese. Fresh with victory, the legend continues, the king and his courtiers were boating on the lake when the giant turtle arose, retrieved the magic sword, then plunged to the depths and returned the blade to its divine owners. Since that time, the lake's name has been Ho Hoan Kiem, which means "Lake of the Returned Sword." The story is retold in thousands of schoolbooks and in popular performances at Hanoi's water-puppet theaters.

The turtles are seen so rarely that many locals still consider them legend rather than reality, though reality seems to be getting the edge of late. A recent sighting, among the most credible, occurred on March 24, 1998, when passersby caught a glimpse of several turtles as they surfaced to take in the spring air. An amateur cameraman caught the creatures on a video, which subsequently aired on Vietnamese television. The announcer also claimed that the turtles made another appearance on April 5th.

An intriguing series of close encounters took place in December of 1996. Witnesses reported seeing a large turtle after a swarm of bubbles appeared on the lake's murky surface. A flipper popped out, and part of its shell (estimated to be 40 inches across in its entirety) rose into view. Its green-and-yellow head, the size of a football, also appeared. On another occasion, the creature came to within seven feet of the shore, swiveling its head to show a great downcast mouth.

"If we have cooperation from international experts and they determine this is a new species," says professor Duc, "it will be a significant contribution to world biological diversity. And since the turtles are right here in the middle of urban Hanoi, many people can easily come to see them." In this vein, local civic and governmental groups plan to clear the Lake of the Returned Sword of pollution, which may prove to be harmful to the big turtles. The construction of an artificial beach has been proposed to facilitate breeding.

Sources: Rathavary Duong, "Rare Hanoi Turtle Surfaces on Jiang Visit," Reuters News Service, March 2, 2002; "Giant Turtle Sightings Set Vietnam Capital Abuzz," *The Cold-Blooded News: The Newsletter of the Colorado Herpetological Society*, Volume 25, Number 6, June 1998; "Fabled Turtle Rears Its Head in Hanoi Lake," Vietnam News Service, March 15, 2000; "Hoan Kiem Turtle Rears Its Head," Vietnam News Service, July 1, 2002; Mark McDonald, "Legendary Turtle Creating Ripples Across Vietnam," Associated Press, November 2, 1998.

Mystery Sirenian

PHYSICAL CHARACTERISTICS

The Mystery Sirenians resemble manatees in that they have large, elongated, bulbous bodies but lack dorsal fins and hind limbs. They have very little hair, distinctively whiskered parted upper lips, front limbs that have been compared to paddles, and two nostrils on the top of their snout, which have flaps of skin that close over those openings when the animals go underwater. The recognized du-

gongs, which are marine mammals, have tails shaped like a V, like a dolphin's tail; the known manatees, both marine and freshwater, have round tails with no fork.

Witnesses of the marine Mystery Sirenian describe a huge, round aquatic animal with large, hairy split upper lips. The otherwise hairless animal is more than 20 feet in length, has two front appendages, and a forked or solid tail that moves up and down in the water. This very distinctive "harelip" appearance, along with its whale-like tail, strongly suggests Steller's sea cow, which science says has been extinct for more than 200 years.

RANGE

The Marine subtype is reported in the Gulf of Anadyr, Siberia; the Commander Islands in the Bering Sea; and the Pacific Northwest coastal waters near Attu, Alaska, as well as the Arctic Circle and Greenland. The freshwater range of the Mystery Sirenian seems confined to central South America and Central Africa.

HISTORY

Sirenia, the order that includes manatees and dugongs, have a very real cryptozoological skeleton in their closet, as marine author Richard Ellis so aptly puts it. Since these shy warm-water creatures—the known living Sirenia—never measure more than 13 feet in length, it's no wonder that the reports of a sea cow more than twice as long as the longest manatees and dugongs and living in the icy waters of the Bering Strait have a distinct Sea Monster quality about them.

Sirenians are vegetation-eating mammals that have completely adapted to living in water. In the fossil record, there is evidence of 12 species, but today Sirenia consist of just 4 species—the West Indian Manatee *(Trichechus manatus)*, the Amazon Manatee *(Trichechus inunguis)*, the West African Manatee *(Trichechus senegalensis)*, and

the Dugong *(Dugong dugon)*—and two subspecies, the Florida Manatee *(Trichechus manatus latirostris)* and the Antillean Manatee *(Trichechus manatus manatus)*, both subspecies to the West Indian. These are found in both marine and freshwater, though the Amazon Manatee is an exclusively freshwater creature, and the dugongs seem to be exclusively marine. Sirenians are commonly referred to as "sea cows," even though only the supposedly extinct Steller's sea cow *(Hydrodamalis gigas stelleri)* should perhaps be called a "cow of the seas." (Sirenia are closely related to elephants, hyraxes, and aardvarks—the subungulates—and are not related to whales, dolphins, seals, or sea lions, as is often thought.)

The existence of the Steller's sea cow dates back to the Pleistocene Epoch, when it ranged the Pacific from Japan to Baja California. It was first discovered and described for science in 1741 by German naturalist Georg Wilhelm Steller during explorer Vitus Bering's expedition to the sea that now bears his name. At that time, a population of about 2,000 lived in the shallow coastal waters of the North Pacific. These large, rotund animals traveled in herds of males, females, and juveniles, and were said to be gregarious and, for their sake, far too friendly to humans.

Soon after their discovery, fur hunters began to kill the defenseless Steller's sea cow for its tasty meat, and within 27 years, the Steller's sea cow had been systematically slaughtered to extinction. The last Steller's sea cow supposedly died on one of the Bering Islands in 1768.

Where the story of the zoological Steller's sea cow ends, however, the story of the cryptozoological Steller's Sea Cow begins, as sightings of these animals have continued, off and on, for the last 200 years. Steller himself was aware of these "post-extinction" reports. Residents of Bering Island claimed that Sea Cows were still being killed and eaten in the area in the late 1770s. A Polish natural-

ist was certain that Sea Cows had survived on Bering Island to as late as 1830, and native reports of the animal were recorded there and in the Aleutian Islands in the mid-nineteenth century.

Sightings have continued well into the twentieth century. A Steller's Sea Cow allegedly washed up on the shores of Cape Chaplin, on the northern end of the Gulf of Anadyr, Siberia, in 1910. In the middle of the century, a harpooner reported regularly seeing 32-foot, finless animals not far from Bering Island in July of every year. The crew of a Russian whaler observed a group of what appear to be Sea Cows in 1962 (see case, pages 190–191), and a Russian fisherman walked up to—and touched—a live Sea Cow at Anapkinskaya Bay in the summer of 1976, though this may have been a stray Northern elephant seal. And finally, a Sea Cow skeleton was supposedly found on a Soviet island in 1983.

Zoologist Bernard Heuvelmans was one of the first to recognize the fact that Steller's Sea Cow may not be extinct. More recently, mainstream scientists such as marine biologists Bret Weinstein and James Patton of the University of California have noted that there are vague reports of Steller's Sea Cows from along the northwest coast of North America and the northeast coast of Asia, in the Arctic Ocean, and near Greenland. If such reports are not discounted, then *Hydrodamalis gigas stelleri,* or a subspecies, may still be alive today.

CANDIDATES

This type has a definite link to a known species, *Hydrodamalis gigas stelleri,* or Steller's sea cow. Like all Sirenians, Steller's sea cows are mostly hairless (except for whiskers), lack ear flaps (pinnae), have sphincter muscles in place of eyelids (their nostrils are closed by valves), and have a paddle for a tail. There is some question as to whether they have the ability to dive or submerge completely; if

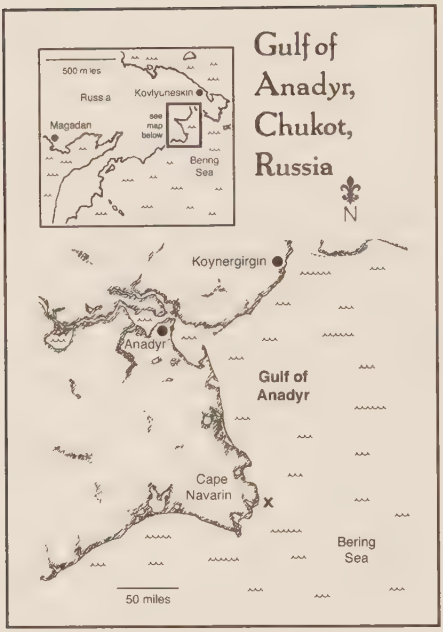
not, their extinction would probably be assured. Also debated is whether *Hydrodamalis* has flipper-like forelimbs, or whether they are relatively short with a distinct hook-like shape.

The Steller's Sea Cow is not the only Mystery Sirenian in question, however, though the evidence for the other forms or subtypes is extremely limited. While these other reports may involve a new species or subspecies of Sirenian, most likely they are known Sirenians extending their ranges. There are no contemporary reports of this subtype. For instance, the "St. Helena Manatee," a yellow, ten-foot creature with a bristly moustache, was reported from the 1600s on, near the island of St. Helena in the South Atlantic Ocean, but has not been seen since 1810. Some believe this may have been a seal.

Similarly, three freshwater Mystery Sirenians have not been reported since the early twentieth century. One form, known as the Auli, has been reported in Ethiopia (Lake T'ana), Eritrea (the tributaries of the Mereb Wenz) and in Chad (Lake Chad, the Dagana marshes, and the Ounianga lakes). Another form, known as the Miga, has been sighted in the Central African Republic (Mbomou River), the Democratic Republic of the Congo (Uele and Dungu rivers) and in Guinea (Niger River). Both the Auli and the Miga involve creatures about ten feet in length, and both may be evidence of a new, extended range of the West African Manatee *(Trichechus senegalensis)* or of a new, unknown manatee. Bolivia's 12-foot "Lake Titicaca Seal," seen mostly around the Copacabana peninsula and the Strait of Tiquina, is most probably a form of the Amazon Manatee *(Trichechus inunguis)*, the only known *exclusively* freshwater form of Sirenian.

One of the recent success stories in cryptozoology involved Sirenians. In the early 1980s, University of Virginia anthropologist Roy Wagner pursued reports of a traditional mermaid called Ri. The local peoples and natives of Central New Ireland, which is lo-

cated northeast of Papua New Guinea, were seeing males, females, and juveniles subsisting on fish in the shallow seas around the Bismarck and Solomon archipelagos. Wagner initially dismissed dugongs or porpoises as mermaid candidates since both were known to, and readily identified by, the natives. But dugongs can be elusive, and when Wagner and the secretary of the International Society of Cryptozoology, Richard Greenwell, closed in, the animals were positively recognized as *Dugong dugon*. Dugongs are an endangered but widely dispersed Sirenian, found in marine habitats off 43 countries along the Pacific and Indian oceans.



TYPE:
MYSTERY SIRENIAN

SUBTYPE: Marine

Descriptive Incident:
DATE: July 1962
LOCATION: Gulf of Anadyr, Siberia
WITNESSES: Crew of the *Buran*

DURING AN EXPEDITION, THE CREW OF A SOVIET WHALING vessel spotted what appears to have been a troop of sea cows, or *morskaya korova* in Russian, off Cape Navarin in the northwest Bering Sea.

Very early one morning, while the ship was near the coast, several crew members saw about six very large, unusual-looking animals. The witnesses, all whale hunters with many years experience, unanimously agreed that the animals, which were some 250 to 300 feet away, were not cetaceans or pinnipeds.

They described the animals as 20 to 26 feet long and dark-skinned. Their heads were relatively small and sloped abruptly toward the body. Their upper lip appeared to be split in two and overlapped its bottom lip, though this detail may well be a misinterpretation of a thick mustache seen at a distance. The frayed fringe of the animal's tail surprised the observers.

The animals would swim slowly, dive for a short time, then emerge forcefully. The animals swam as a group parallel to the coastline.

The crew sighted a similar creature when the ship returned to the same area the next day.

The three Soviet biologists who submitted this report acknowledged that the sea cow had indeed been completely exterminated in the Commander Islands by fur seal hunters. "However," they note, "in other areas, where the sea-cow may have lived, if we are to judge from the data we have cited, there was no hunting of this kind, because there were no animals with valuable fur. We may suppose that the sea-cow could have survived there if adequate ecological conditions coincided, but we have no information on the subject. If this is the case, the sea-cow must have been able to remain unnoticed for a long time."

Source: A. A. Berzin, E. A. Tikhomirov, and V. I. Tronin, *Priroda [Nature],* 1963.

Giant Beaver

PHYSICAL CHARACTERISTICS

Witnesses say that this Lake Monster resembles a giant beaver the size of a bear swimming in a lake. This supersized, beaver-like rodent is much larger than the North American beaver *(Castor canadensis)*, which measures less than three feet tall. The Giant Beaver of British Columbia is described as 14 feet long, with a head and neck that is 4 feet long, a long tail, and beaver-like legs.

RANGE

According to Native folklore, this large beaver-like animal once ranged from Labrador, New Brunswick, and Nova Scotia in Eastern Canada, to parts of the West, including British Columbia. Most present-day accounts of Giant Beaver come from the western United States and Canada, with a concentration of sightings from Utah through the Pacific Northwest.

HISTORY

Sightings of the Giant Beaver appear in tales from Native North Americans. The Pocumtuck Indian tribe from the area around Deerfield, Massachusetts, has a legend that describes a large lake in the Connecticut River valley associated with the lore of a Giant Beaver. In their legend, Lake Hitchcock, a Pleistocene Epoch lake, was home to a Giant Beaver, which occasionally came ashore to attack and eat people. The Pocumtuck people tell of a hero killing the Giant Beaver, making their population safe from this animal. According to Pocumtuck legend, the Giant Beaver can still be seen today.

Archivist and cryptozoologist George Eberhart points out in his 2002 encyclopedia, *Mysterious Creatures,* that the Montagnais–Naskapi/Algonquian people of Labrador apparently named the Mishtamishku-shipu, or Giant Beaver River, for the animals, said to be Giant Beaver, which were killed there. In British Columbia, the creature called the *slal'i'kum* has a Chilliwack (Salishan) origin and refers to accounts of huge beaver-like beasts in area lakes. Fowler Lake, British Columbia, has accounts of a giant otter or beaver during the nineteenth century, while similar creatures were reported in Cultis Lake during the 1990s.

In 1828, the British naturalist Charles Fothergill, who had immigrated to Upper Canada in 1816, went in search of the remains of the Giant Beaver. This was an outrageous idea at the time, but he

was convinced that the Indian accounts about gargantuan beavers had a factual foundation. Fothergill was a publisher, painter, naturalist, and member of the Legislative Assembly of Upper Canada, who mentioned his pursuit in his diaries and natural-history notebooks that still exist today. Fothergill was essentially the first to speculate that some American Indian Lake Monsters actually involved sightings of Giant Beaver.

The first fossil giant beaver remains were found in a peat swamp near Nashport, Ohio, and were described, but not named, by S. R. Hildreth in 1837. The geologist J. W. Foster named the specimen *Castoroides ohioensis* in a publication a year later. In the years since 1838, giant beaver fossil fragments, while scarce, have been found in several of the places where the Indians told stories of the Giant Beaver. Fothergill's work has been vindicated.

Utah has a particularly rich tradition of the Giant Beaver. Ute tribal lore tells of "water babies" haunting Bear Lake. The Utes say that a mysterious creature once swallowed a man whole near Pelican Point. The Shoshone report that the creature was seen in Bear Lake Valley after the great snowstorm of 1830, which wiped out the buffalo in the area. Tribal tradition says that the Lake Monster would capture and carry away swimmers. The long, huge animal would spurt water, and occasionally it crawled ashore on its short, 18-inch-long legs, according to folklorist Austin Fife, who collected the accounts.

Two of Utah's lakes, Utah Lake and Bear Lake, have a long history of monster sightings, revealed during the last 150 years of Mormon settlement. In 2002, their well-respected newspaper, *The Deseret News*, mentioned the "impeccable credentials of those who have seen the beast. The reputation of revered pioneers who had intimate encounters with The Monster should silence all doubters. Utah history testifies to the honesty of the Thomas, Cook, Rich,

Johnson, Davis, Collings, Pratt, Budge, Slight and Broomhead families."

The story begins in *The Deseret News* of July 27, 1860. Three weeks earlier, S. M. Johnson, while on the road to Round Valley, saw what he thought was a drowned body in Bear Lake. As he waited for the body to drift ashore, he saw a head about two or three feet high sticking out of the water. It looked like an animal head, but it was like none he had ever seen before. It seemed to have "bunches," or ears, on its head. The creature turned its head back and forth, and threw water from its mouth or nose when a wave overtook it.

Two weeks later, according to the paper, N. C. Davis, Allen Davis, Thomas Slight, J. Collins, and six unnamed women were traveling from Fish Haven to St. Charles when they saw the Bear Lake creature—or, more properly, creatures. Swimming rapidly, the lead animal, which was brown and about 40 feet long, was followed by up to six small ones. The witnesses watched this display from a distance of three miles, so size estimates like "the size of a house" must not be taken uncritically.

Also in 1860, *The Deseret News* reported that Marion Thomas and three brothers named Cook had seen the thing in Bear Lake, opposite Swan Creek. They said it was 20 feet long and covered with "light brown fur like that of an otter." Two flippers, like fishermen's oars, "extended upwards from the body" (whatever that means). They were so close, they said, that they could have shot it with a rifle, if they had had one. Commenting on this report, Peter Costello, in his *In Search of Lake Monsters,* says: "Preconceptions about what monsters must be has influenced them to speak of a serpent's head, when from the exactness of the rest of the account we can see it must have been a mammal. The light brown fur, like an otter's, is a detail worth noting. Clearly this is no otter, though."

The accounts continued. In 1864, Isaac Fox saw a 25- to 30-foot-

long creature in the water while hunting on the north shore of Utah Lake. The beast, which looked reptilian according to a modern retelling, had fierce, dark eyes and a hound-shaped head. It chased Fox to shore and almost ran him down before swimming back to join a second animal. The creatures seemed to prefer the lake's northern end, for a similar beast was spotted there the following year. Henry Walker of Lehi was in Utah Lake in 1864 when "to his fear and surprise, he saw what looked like a large snake . . . with the head of a greyhound," according to D. Robert Carter, a historian speaking at the Utah State Historical Society's 49th annual meeting at Westminster College in August 2001. More sightings occurred in the late 1860s.

In 1870, fishermen from Springville discovered the skull of a large creature with a five-inch tusk protruding from its jaw. Here at last was physical evidence. Was this the skull of a Giant Beaver? Perhaps, but no one seems to know where this skull is today.

Latter Day Saints (LDS) Bishop William Price of Goshen and two fellow travelers spotted the monster on the west shore of Utah Lake in 1871. Later, on July 19th, Milando Pratt and Thomas Rich saw "a body in diameter like a man and a head, which suggested a walrus without tusks." When they shot at it, the creature swam away.

On Friday, May 15, 1874, William Budge, a famous Mormon pioneer and wagon-train captain, and at least two other respected Rich County citizens, were traveling home, when suddenly an object about 20 yards from the shore of Bear Lake, about three miles north of Laketown, caught the men's attention. "At first sight we thought it might be a very large duck," Budge wrote, but as the men got nearer, they could tell it was considerably larger. "Its face and part of its head were distinctly seen, covered with fur, or short hair of a light snuff color."

The creature was flat-faced and had "very full large eyes, and prominent ears," according to Budge. The face resembled that of a

fox, but the distance between its eyes was like "that of a common cow." Budge thought that the animal's neck was about four or five feet long, but he couldn't judge its overall size. "It did not look ferocious, and was in no hurry to go but kept moving slowly," he reported. The creature dove again and "came up and moved off into the Lake as fast as a man could walk."

Mormon leader Brigham Young heard of this encounter three days later, according to official records. LDS Apostle Wilford Woodruff noted in his journal that Budge, Milando Pratt, and Brother Bankenhead saw what they called the "Bear Lake Monster." Woodruff thought that they had actually seen a large otter, but other LDS Church authorities were not so skeptical. Around the same time, at Bear Lake, Utah, farmer Aquila Nebeker related how the monster crawled ashore and ate 20 of his sheep.

For years, Mormon leaders showed a keen interest in the animal. Young not only believed in the beast but actually went after the Bear Lake Monster. Shortly after Budge's report, Young entered into an arrangement with Phineas W. Cook of Swan Creek to catch the monster in Bear Lake. Cook had devised an ingenious plan to capture the elusive beast. He attached a barbed hook to a 20-foot cable, which he connected to 300 feet of 1-inch rope. The rope was tied to a buoy marked with a large American flag. Another 300 feet of quarter-inch rope secured the buoy to a tree onshore. "I spent my time faithfully during the season," Cook replied, "but did not succeed." The monster had repeatedly stripped the fearless fisherman's hook off its bait, indicating how close the scheme came to success.

Still the sightings continued. Willie Roberts and George Scott provided the best description of the creature in June 1880. Far out in the lake, a small animal resembling a dog or beaver approached the boys. They thought nothing about it until the creature roared like a lion, raised its huge head out of the water, and revealed four legs, each about a yard long. The head boasted alligator-like jaws about

three feet long. The critter chased them, making "savage gestures." The boys' "terrified countenances" and consistent reports convinced their parents.

Equally convinced was the English traveler Phil Robinson, who interviewed the boys and felt that they had met the "Great Snake" of Utah Lake. "Does the Smithsonian know of this terror?" Robinson asked. Needless to say, the Smithsonian did not come calling.

Writing of his travels in *Harper's New Monthly Magazine* in October 1883, Robinson vaguely mentions a party "having surprised the monster basking on the shore" and its trail being found. But Robinson wrote as if the details of its tracks or a description of the animal were well known to the reader, although, of course, they have been lost to our generation. After speaking of the Utah reports to Professor Richard Owen (famous for his debates in the London media on the 1848 Sea Serpent reports), Robinson concluded that the Bear Lake Monster was some form of freshwater seal or manatee.

In 1946, Cache Valley Boy Scout executive Preston Pond reported seeing the Bear Lake creature. After hearing Pond's story, folklorist Austin E. Fife wrote: "Scouts don't lie."

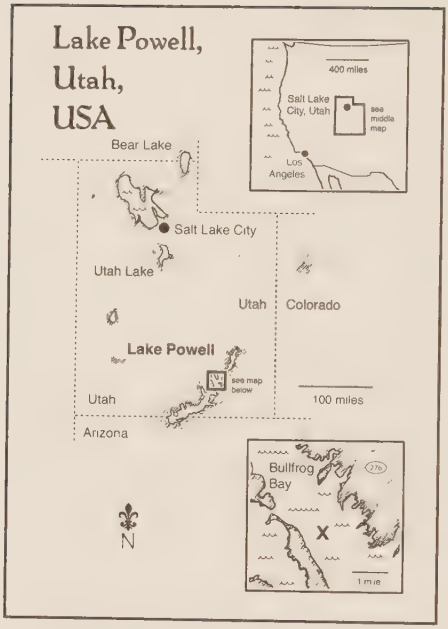
CANDIDATES

The present-day North American beaver *(Castor canadensis)* may be responsible for some Giant Beaver reports. But this beaver is only a little more than 2½ feet long with a 10-inch tail, and it weighs no more than 66 pounds. Of course, an attacking animal can distort witness estimates of the size of a familiar animal. Despite being a vegetarian, the common beaver can be very aggressive when its territory is threatened.

Taking into account its brown fur, teeth, and extremely large, long beaver shape, this type of Lake Monster may be a surviving population of the supposedly extinct giant beaver, *Castoroides*

ohioensis, which was the size of a black bear and weighed 600 to 700 pounds. *Castoroides ohioensis* was almost 8 feet long and had enormous, convex incisor teeth 6 inches long, 4 inches of which extended beyond the gum line. Its tail was long and beaver-like but thinner, and some paleozoologists sense that it was more round than flat.

The fossil evidence for *Castoroides ohioensis* is extremely rare, but is wide-ranging in distribution. A single tooth was found in Alaska in 1942, and a single incisor was found in Toronto. Skull and skeletal materials have been discovered from as far north as the Yukon to as far south as Florida, and from New York to Nebraska. Some of the more complete fossils come from Ohio, where the giant beaver lived concurrently with humans less than 10,000 years ago. A possible *Castoroides ohioensis* lodge was discovered near New Knoxville, Ohio, in 1912.



TYPE:
GIANT BEAVER

Descriptive Incident:
DATE: 2000
LOCATION: Lake Powell, Utah
WITNESS: J. Greenwald

J. GREENWALD IS A 62-YEAR-OLD AEROSPACE FINANCIAL planner, who initially wanted anonymity, for fear of ridicule. On August 21, 2002, she reported her Giant Beaver sighting to the National Institute of Discovery Science (NIDS) in Las Vegas. Two years earlier, during a boat trip, she and her companions had seen a beaver the size of a horse in Lake Powell, Utah. Lake Powell is located south of Bear and Utah lakes, in Utah.

"You wouldn't believe how big it was," she wrote on the NIDS website. "It could kill you. Lake Powell is hundreds of miles of unknown unsearched water where such a creature could easily hide and obviously has for a long time. I would not post this here, but I don't know where else to tell this story. We couldn't believe it when we saw it. It was not a normal beaver."

Greenwald said that the sighting took place at around 5 P.M. and lasted 15 minutes. The weather conditions were clear. The only

noise she heard was "water rushing." She saw the "beaver" just 50 to 100 feet away, across from the Bullfrog Marina in Utah. The beaver was "extremely large," "brown/black" in color, and weighing some "700–900 pounds," she told Loren Coleman in 2002.

"We were all amazed, as beavers are not that big," she said. "This beaver was about the size of a medium-sized horse or a large bear. It had huge front teeth and large back legs and was not, in our opinion, a normal beaver. It definitely had beaver-like characteristics but it was more of a prehistoric type animal that was so large that we were all in shock. I don't think beavers get as big as horses, do they?"

Lake Powell is a man-made lake that was created following the construction of the Glen Canyon Dam, a decade-long project beginning in 1956. The habitat of the Utah lakes seems to favor the Giant Beaver, and Powell may have been naturally colonized from the upper river areas that existed prior to Powell's existence in this sparsely populated area.

Sources: Personal communication between J. Greenwald and Colm Kelleher, August 21, 2002; Personal communication between Colm Kelleher and Loren Coleman, August 21, 2002; Interviews with J. Greenwald by Loren Coleman, August 22–23, 2002; National Institute of Discovery Science website.

Mystery Monitor

PHYSICAL CHARACTERISTICS

These large, distinctive, lizard-like or crocodile-like amphibious animals are often described as "aquatic" cousins of the Komodo dragon. Several varieties, possible species, or different geographical races may be lumped under the catchall name of Mystery Monitor. These monitors range in length from 14 to 20 feet and are generally brown and dark green in color, with a stocky but long neck, sharp

teeth or fangs, and thick legs. They exhibit aggressive behaviors and bellowing noises. Their crocodile-like skin, plates on the head, forked tongue, short spines on the back, and clawed feet make for a decidedly reptilian appearance.

RANGE

The Mystery Monitor is an Australasian aquatic animal, with reports from India (especially Assam), Bhutan, Burma, Papua New Guinea, Australia, Sumatra, and the various small islands of Indonesia.

HISTORY

The search for "modern dragons" (the monitor lizards), the progress of natural history, and the boom in animal collecting all go hand in hand. Early European traders, shippers, travelers, missionaries, and colonists often collected museum specimens, especially in the Indonesian area, of increasingly large lizards. Most made their home on land, but others actually seemed to dwell in the water—so much so, in fact, that they could be confused with reports of Sea Monsters.

The search for the Mystery Monitor begins with the story of the Komodo dragon. In 1910, a Dutch pilot is said to have crash-landed on Komodo, a rugged, volcanic Indonesian island. After his rescue, he claimed to have seen an incredibly large lizard, some 13 feet long. Another story, equally murky in origin, has it that in 1912, a pilot who had landed safely on Komodo returned with stories of monstrous "dragons" that roamed the beaches, walked into and out of the sea, ate goats and pigs, and attacked horses. Nobody believed him.

What we do know for certain is that in 1912, Lt. Van Steyn van Hensbroek killed an animal—later to be called a Komodo dragon—measuring seven feet long. He sent a photograph and skin to Maj. P. A. Ouwens, director of the Zoological Museum and Botanical

Gardens in Buitenzorg, Java. Ouwens was the first to write up a scientific description of the Komodo dragon.

During the early 1920s, the Dutch tried and failed to capture live Komodo dragons. But in 1926, an English aviator named Cobham spotted a Komodo dragon chained to a tree on Sumbawa and captured it. (This may be the one that arrived at the Amsterdam Zoological Garden at the end of 1926.) The letter Cobham wrote to *The Times* of London about his find caused quite a stir, and the hunt was on for Mystery Monitors of all sorts.

With the whole world watching, Douglas Burden—along with a professional herpetologist, a Pathe newsreel cameraman, and a skilled hunter—led an expedition in 1926 to capture live Komodo dragons. Newsreels of the Komodo dragon captured the public fancy, and it became an international zoological superstar. When Burden brought back two live Komodo dragons to the Bronx Zoo—the first exhibition in the New World—the lines to see them stretched for blocks.

Expeditions sponsored by museums and zoos went off in search of more Komodo dragons. While the animals seemed to favor the hot, mostly dry volcanic islands, some Komodo dragons were found living on beaches. Some actually swam to the nearby islands in search of food.

In the 1930s, two of the three Richard Archbold Expeditions of the American Museum of Natural History to New Guinea collected reports of a monitor lizard, up to 40 feet long, called the Papuan Dragon. Considered to be a tree monitor lizard at the time, more recent reports from Papua New Guinea suggest, in fact, a more aquatic habitat.

As World War II came to a close, the world heard about the Buru, a 20-foot, aquatic version of the Komodo. This large, unknown monitor lizard with a hoarse bellowing call was said to live in remote

valleys of the Himalayas of Assam, a province in the northeastern corner of India. The existence of these "lizard-like monsters" was reported by Christopher von Fürer-Haimendorf, professor of anthropology at Osmania University in Hyderabad, India, who between 1944 and 1945 conducted a survey of native peoples on the Assam-Burma border, including the "primitive" Apa Tanis.

Although his findings are unpublished, Fürer-Haimendorf shared his notes with two British explorers, zoologist Charles Stonor and a respected authority on Assamese tribes, J. P. Mills. Late in 1945 and early in 1946, Stonor and Mills visited the Valley of the Apa Tanis and interviewed the local people about their traditions and the creature that lived in the valley's great marshy lake. Mills and Stonor wrote a paper on their investigation of the Buru, which was published later in 1951.

In the meantime, the press got hold of the news of a giant new "dragon" in Assam. When an article about Fürer-Haimendorf's findings was published in the *Illustrated London News* for November 8, 1947, the Buru became a media sensation. The following year, the London newspaper *The Daily Mail* sponsored a Buru expedition to the Himalayas to find and bring back physical evidence of the Buru. Charles Stonor, with his firsthand knowledge of the valley, and Ralph Izzard, a journalist, headed the effort. Dispatches were carried in *The Daily Mail*, with the hopes that a new monster would be discovered any day. Though they found no solid evidence, they did manage to gather more eyewitness accounts.

Was the Buru extinct in the secluded valley? Izzard would later write *The Hunt for the Buru* in 1951—which included the findings of Stonor and Mills. Izzard's book preserves a large body of historical encounters that convinced Bernard Heuvelmans, during the 1980s, that the Buru, an unidentified monitor, may be only recently extinct (see case, pages 209–211).

In 1986, zoologist Heuvelmans pointed out in his "Annotated Checklist of Apparently Unknown Animals with which Cryptozoology is Concerned," which appeared in the journal *Cryptozoology,* that sightings of other aquatic monitors remain to be investigated, even if the Buru might be extinct. These include reports of lizard-like monsters from the Sundarbans of the Ganges Delta region in India and Bangladesh. These creatures are recognized as different from the saltwater crocodile *(Crocodylus porosus),* although the two species are said to have a symbiotic relationship. Heuvelmans described a similar beast, what the natives call a *jhoor,* from the Gir region of India. Other sightings of large unknown monitor lizards issue from Bhutan (one was even seen by that country's king) and Burma, on the mainland.

John Blashford-Snell's Operation Drake and Operation Raleigh attempted to gather specimens of these unknown monitor lizards. His group supposedly caught one of these animals in marshland near the Gulf of Papua in 1980, but it turned out to be a young crocodile monitor that was more than six and a half feet in length—a sizeable juvenile. One of Operation Drake's zoologists, Ian Redmond, later sighted a 12-foot animal.

In Australasia, sightings of large, cow-headed, unknown aquatic monitor lizards—called *au angi-angi,* and *artrellia* in Papua New Guinea, or "Messie" by the local press—continued into the 1990s. Two independent groups of eyewitnesses, for example, saw one of these cryptids near Boboa, in Lake Murray, Papua New Guinea, on December 11 and 12, 1999.

CANDIDATE

These unknowns may be large Asian relatives of the five-foot-long African water monitor lizard *(Varanus niloticus)* and the ten-foot-long Komodo dragon *(Varanus komodensis).* To date, the longest living lizard remains the Komodo dragon.

What does the Buru and its kin really represent? Journalist Ralph Izzard thought that the Buru was a dinosaur, surviving into modern times. Tim Dinsdale, the Loch Ness Monster researcher, thought of the Buru as an unrecognized new crocodile. Zoologist Karl Shuker thinks it is a large, swamp-dwelling lungfish (Order Lepidosireniformes). And biologist Roy Mackal, who reflects the mainstream thought on these cryptids in general, has written of the Buru as an unknown species of monitor lizard (*Varanus* sp.).

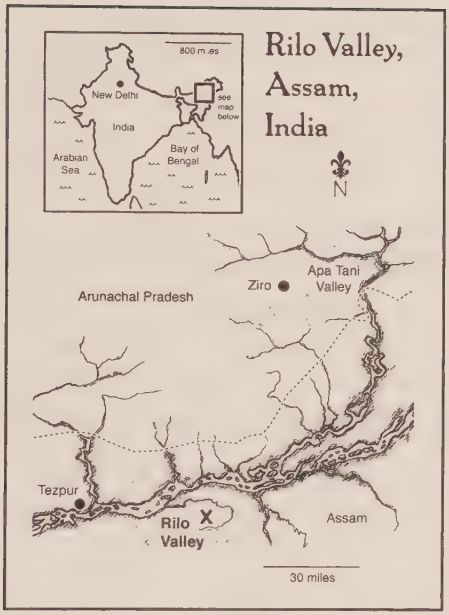
Monitor lizards are being discovered at an increasing rate. Zoologist Daniel Bennett of the University of Aberdeen, Scotland, wrote an article about the subject in 2001 in the Swedish journal *Terrariet*. It was titled, "Notes on some recently described monitor lizards from Indonesia." With no shortage of new species of monitor lizards, he set out to answer the question, "where do they all come from?" Bennett found that "all the newly described species are known only from the pet trade or from 19th century specimens in museums." None were from new expeditions dedicated to searching for them.

Bennett provides specific examples. In 1995, a very striking monitor appeared in the American pet trade, originating from Halmahera, east of Sulawesi, Indonesia. It was later named *Varanus yuwonoi,* after the well-respected animal exporter Frank Bambang Yuwono. Shortly afterward, a bright yellow monitor lizard, clearly quite unlike any known species, began to appear in Europe and the U.S. as pets. This new monitor was named *Varanus melinus,* and its range was said to be from the island of Obi south of Halmahera to the Suka Islands east of Sulawesi. Bennett notes that these locations are dubious, as the pet suppliers are probably hiding the real sites of these animals. Indeed, he says: "At the time of writing, no eyewitness accounts of these animals in nature exist."

Two monitor species were described for the first time in 1999 and 2000; *Varanus caeruliverens* is distinguished by its turquoise col-

oration and pink tongue. A specimen was collected at Patani on Halmahera in 1895, otherwise the animal is known only from live animal imports. The other new species well represented in museum collections is *Varanus ceramobonenis*, which comes from the islands of Ceram and Ambon and the smaller Banda Islands, Obi and Buru. (The Indonesian island named Buru is not related to the creature of the same name.)

"These new species," concludes Bennett, "inhabit areas away from the mangrove and other saltwater areas inhabited by *V. indicus*, but at present virtually nothing is known about the ecology of any of these animals. There are certainly many more unknown monitor lizards in Indonesia (and elsewhere in Asia) that still await discovery."



TYPE:
MYSTERY MONITOR

Descriptive Incident:
DATE: 1937–1947
LOCATION: Apa Tani Valley, Hang Valley, and Rilo Valley, India
WITNESSES: Chige Nime, Takhe Bdha, Rilo Valley villagers

THE DEEP VALLEYS OF THE HIMALAYA MOUNTAINS are—or once were—the home of lizard-like creatures called *buru*. During a 1945 visit to the area, Charles Stonor, a zoologist, and J. P. Mills, an authority on Assamese tribes, met a man named Takhe Bdha, who told them that Hang Valley villagers had killed and cut a bellowing Buru to pieces, turning the waters it had emerged from red. Stonor also heard from a Duta priest named Chige Nime that the Buru of the Apa Tani once lived in nearby swamps, but were systematically killed by villagers when the water was lowered.

Stonor learned that when the first of the Apa Tanis settled in the valley, there was a great marshy lake, which, according to the tribesmen

> *was the home of great aquatic beasts the like of which they had never seen before, and to which they gave the name Buru. The*

Buru was a heavily-built, cumbersome animal, fifteen feet or so in length with a long and thick neck, and a broad head tapering to a snout. There were three hard plates on the head, one on top, and one on each side. The tongue was long and forked, after the fashion of a snake. There were teeth "flat like those of a man" and according to some accounts there was a pair of small [tusks] in each jaw. The body had a girth such as "a man could just put his arms around," and measured some eighteen inches across the back. A row of blunt spines ran down the back and along each side. There were four stumpy limbs, with feet "like those of a burrowing mole." The Buru had a thick and powerful tail, three or four feet long, and on each side were broad and deeply-fringed lobes. The skin was fish-like and the colour mottled blue/black above and whitish below.

There were many of them, and first and foremost they were aquatic, keeping to the deeper water, so that they were not very often seen. In the summer months they sometimes crawled out onto the banks to bask in the sun. In winter they disappeared into the mud on the bottom and were never seen. Now and again they appeared above the surface of the water, when they gave a coarse, bellowing call.

They were believed to have been vegetarian, and were always nosing about in the mud, weaving their way through the swamp with their long necks, when the hard plates on their heads were brought into play. They did not lay eggs, and the young were born alive in the water.

In 1947, Stonor traveled to a nearby valley and interviewed members of the Rilo tribe who had lived in the area only from 1937 to 1947. Unlike their Apa Tani neighbors, the Rilo spoke of the Buru as if it still lived in the Rilo Valley. Stonor questioned Rilo villagers who testified to having seen upward of three Buru at one time

in their swamp. Although he was unsuccessful in his attempts to find the creatures, Stonor came away convinced that a real animal was behind the sightings.

"I for one find it impossible to doubt the truth of the story," Stonor concluded. "The appearance and the habits strongly suggest a giant member of the Lizard family." The British zoologist compared the Buru specifically to the Komodo dragon, *Varanus komodensis*.

Sources: Ralph Izzard, *The Hunt for the Buru* (Fresno, CA: Craven Street/Linden, 2001), pp. 19–48; Roy P. Mackal, *Searching for Hidden Animals* (Garden City, NY: Doubleday, 1980), pp. 79–98.

Dinosauria

PHYSICAL CHARACTERISTICS

Reports of what we are calling Dinosauria describe a variety of dinosaur-like animals. However, we are primarily concerned with those known as *mokele-mbembe* by Central African natives, who say it is approximately the size of an elephant, or about 30 feet in length. It has a smooth, reddish-brown to grey skin, a long, flexible neck, four sturdy legs, and a long tail. The animal spends most of its time

submerged in the water, with only the head and neck breaking the surface occasionally to feed on bankside vegetation. When it does venture out of the water, it leaves behind very large, three-clawed footprints. The animal is said to live in caves washed out by the water at sharp bends in the river. Most sightings occur during the dry season, either in the early morning or late afternoon.

RANGE

Mokele-mbembe is reported from Lake Tele and the west bank effluents of the middle Congo River, spreading mainly over the People's Republic of the Congo and the Central African Republic, and into the borders of Gabon, Cameroon, and Chad. Other Dinosauria have been reported in parts of the Amazon rainforest, Canada, and other parts of the world.

HISTORY

While digging at Babylon in 1902, German archeologist Robert Koldewey unearthed a gateway dated from the time of King Nebuchadnezzar (about 600 B.C.). Today, the gateway is known as the Ishtar Gate. It is wonderfully decorated with bas-reliefs of a fabulous animal depicted along with two known animals—lions and rimi (aurochs or wild oxen). Koldewey recognized the unknown animal as a Sirrush (a dragon; the word *mushrushu* is the commonly accepted modern form, based on a retranslation of the original word, but we will use Sirrush in this historical context). In *The Lungfish, the Dodo, and the Unicorn*, German science writer Willy Ley described the Sirrush as a "zoological puzzle of fantastic dimensions;" it had "a slender body covered with scales, a long slender scaly tail, and a long slim scaly neck bearing a serpent's head. Although the mouth is closed, a long forked tongue protrudes. There are flaps of skin attached to the back of the head, which is adorned (and armed) with a straight horn . . ."

Ley, zoologist Heuvelmans, and biologist Mackal have studied the Babylonian Sirrush and relate it, as well, to the Bible's long-necked, long-tailed Behemoth. While a few say that the Behemoth is the hippopotamus, Mackal thinks that the description suggests a sauropod dinosaur.

This "dragon" is mentioned in another Biblical document. In the Apocrypha, a collection of stories excluded from the Bible, the Book of Bel and the Dragon tells of King Nebuchadnezzar keeping a dragon in the temple of the god Bel, whom the people of Babylon worshipped. When the Hebrew prophet Daniel began to denounce the worship of idols, Nebuchadnezzar confronted him with the Bel-dragon, saying that it "liveth and eateth and drinketh; you cannot say that he is no living god; therefore worship him." Daniel responded by slaying the dragon.

For many cryptozoologists, the Sirrush, this Babylonian dragon, is a mystery with links to the alleged living dinosaurs of Africa. "The most famous of the possible living dinosaurs in tropical Africa," wrote Karl Shuker in 1995, in *Dragons: A Natural History*, "is an elusive water creature, the Mokele-mbembe, which is supposed to inhabit the huge Likouala swamps in the People's Republic of the Congo. . . . In view of the thought-provoking link between the Sirrush and the Congo's mysterious water beast, some zoologists have proposed that it could have been a living Mokele-mbembe, captured in Central Africa, possibly while still a juvenile, and transported alive back to Babylon."

The first *modern* printed mention of such a huge dinosaur-like creature in Africa comes from French missionaries who, prior to 1776, discovered some huge clawed tracks, 3 feet in circumference and 7 to 8 feet apart, in a Congo forest southwest of the Likouala swamps. In the two centuries that followed, missionaries, hunters, colonial authorities, and natives provided descriptions of the animals that had made these tracks.

Few scientists today would even entertain the continued existence of dinosaurs, but at the dawn of the twentieth century, the notion was taken quite seriously. Carl Hagenbeck, the German "King of the Zoos," was the first to boldly suggest in 1909 the hypothesis of dinosaur survival. He had numerous animal catchers working for him in Africa, and elsewhere, and was exceptionally knowledgeable about the world's megafauna. When his animal catchers brought back accounts of contemporary sightings, the fantasy became reality for many adventurers and romantic naturalists.

Could huge, often bloodthirsty reptiles from the Mesozoic Era be roaming the African continent? The idea was developed and promulgated by British science writer Frank W. Lane, by Captain William Hichens of the Intelligence and Administrative Services of East Africa, by Willy Ley, and by zoologist Ivan T. Sanderson. A few sensational hoaxes did little to squelch the enthusiasm for dinosaurs, and the search for such animals ranged from the Gulf of Guinea to Mozambique and from Ethiopia to Namibia, even as far as the interior of South Africa. But as expedition after expedition came back empty-handed, with nothing more than native reports, dinosaur fever eventually abated.

With the publication of Bernard Heuvelmans's *Les Dernier Dragons d'Afrique (The Last Dragons of Africa)*, published in French in 1978, the search territory narrowed to a more realistic and manageable scope. Heuvelmans's study of the evidence led him to conclude that most of the reports of these so-called dragons in Africa concerned outsized pythons or crocodiles, and some other not very dinosaur-like animals. The only reports of animals that remotely resembled sauropod dinosaurs came from three regions: the middle Zambezi River in south-central and southeast Africa, the vast marshes in the interior of Benin in West Africa, and the west-bank effluents of the middle Congo River, stretching from the northern Congo to southern Chad. Heuvelmans further narrowed the search

by dropping the Zambian reports as too old, and those from Benin as insufficient proof since they all came from one person. That left the reports from the Congo, which happened to come from the most trustworthy sources.

Perhaps the most impressive of these was the cautiously worded scientific report produced by the German Likouala-Congo Expedition of 1913–14, conducted by Hauptmann Freiherr von Stein zu Lausnittz. The report gives a very detailed account of the Mokele-mbembe—an animal greatly feared in certain parts of the Congo, specifically the lower Ubangi, the Sanga, and the Ikelemba Rivers. Then, in 1920, the Smithsonian Institution sent a 32-man expedition to Africa, which found unexplained tracks along the riverbank and heard mysterious "roars."

But Heuvelmans also received confirmation from another source, Lucien Blancou, the Chief Game Inspector of the French Colonies, who had picked up direct eyewitness testimony of such an animal from inhabitants of the Ubangi-Chari region while he studied the fauna of West Africa from 1929 to 1945. Then, in 1932, Scottish-born American zoologist Ivan Sanderson encountered large hippo-like tracks in a region without hippos. The natives told him that a creature called the *mbulu-eM'bembe* had made them.

Sanderson's investigations in the 1940s and Heuvelmans's work from the 1950s through the 1970s spurred renewed interest in Mokele-mbembe. In 1976, herpetologist James H. Powell, Jr., gathered reports from Gabon. University of Chicago biologist Roy Mackal led two expeditions into the unexplored Likouala swamps of the Congo—one in February of 1980 with James Powell, and the other in December of 1981, during which they heard, and saw the wake of, a large animal leaping into the water near Epena. They also discovered a path of broken branches supposedly made by the animal, as well as a number of footprints. Neither expedition produced a sighting, however, though they did manage to gather many eye-

witness reports from the local inhabitants, all of which is recounted in Mackal's 1987 book, *A Living Dinosaur?* One involved a band of pygmies who supposedly killed a Mokele-mbembe at Lake Tele around 1959 when the animals disrupted pygmy fishing activities.

Despite the enormous hardships involved—fevers, uncooperative tribes, government paperwork, and vast expanses of near-impenetrable marshland—more expeditions, feeding on the promise of Mackal's adventure, followed. In September of 1981, an expedition led by NASA engineer Herman Regusters claimed actual sightings of the animal at Lake Tele, but failed to produce clear photographic evidence. In 1983, team leader and Congolese biologist Marcelin Agnagna also claimed to have seen a living dinosaur.

On May 1st, Agnagna and his companions spotted a large animal out on the lake about 900 feet away. It had a long neck, small head, and large back. The visible length of the animal was about 15 feet. But attempts to film the animal failed, as in the excitement Agnagna forgot to remove the lens cap from the camera before the film ran out. In the meantime, he continued to wade toward the animal, getting as close as 200 feet before the animal partially submerged, leaving the head and neck above the water for about 20 minutes before submerging completely. Some researchers believe that what Agnagna saw was the giant African freshwater turtle, *Trionyx triunguis;* he insists it wasn't.

Scottish explorer Bill Gibbons conducted two major expeditions to the Congo in search of the Mokele-mbembe, one in 1985 and another in 1992. The creature was not seen, though pygmy informants mentioned that there were at least two Mokele-mbembes still living in the Lake Tele vicinity.

Journalist Rory Nugent, venturing into the Congo in 1986, wrote a stylish and amusing adventure called *Drums Along the Congo,* which included two interesting photographs that Nugent had managed to take of something odd breaking the surface of Lake

Tele, one of which may have been the head of a Mokele-mbembe. Explorer Redmond O'Hanlon then conducted his explorations in the Congo in 1989—producing a literary tome called *No Mercy*—but concluded that witnesses must have mistaken elephants crossing the water with their trunks in the air for the Mokele-mbembe.

Two Japanese expeditions went after Mokele-mbembe in the Congo, one in 1987, the other in 1992. In the first one, the entire expedition observed the large humped back of an animal moving slowly, according to Djoni Jose Bourges, the Congolese wildlife official who accompanied them; and in the second, a film crew flying over Lake Tele took some blurry video of something in the water. Some interpret it as showing Mokele-mbembe swimming in the water, but others think it shows nothing more than two men in a boat with one of them standing upright in the front, as is common in Africa.

The eruption of the Congolese civil war in the late 1990s caused the cancellation of several expeditions, and searchers shifted the hunt to the Cameroon. In 2000, Gibbons and some associates explored the unexplored swamps and rivers of southern Cameroon, where the animal is known as *la'Kela-bembe*. He returned in February of 2001 with a newly founded organization incorporated as CryptoSafari. The team, which consisted of Gibbons, computer scientist Scott Norman, writer Robert Mullin, Canadian cryptozoologist John Kirk, and Cameroon researcher Pierre Sima, showed illustrations to eyewitnesses to assist with the identification of the animals that they claimed to have seen. The investigators were rather surprised to find that the witnesses said nothing when shown the sketch in Roy Mackal's book, which depicts a size comparison between a small sauropod and a pygmy. But when the witnesses saw illustrations of brachiosaurs and diplodocuses, they became excited and cried out, "Mokele-mbembe, Mokele-mbembe." During their sojourn in southern Cameroon, the investigators spoke to dozens of

individuals from pygmy villages who identified the two large dinosaurs as either the *mokele-mbembe* in the Lingala language or *la' Kela-bembe* in the Baka pygmy language.

The Mokele-mbembe is not the only dinosaur-like creature reported in Africa. The problem is that the same name is often used to refer to several animals; investigators have found that sorting them out is a nearly impossible task. In any case, one animal is called by locals the *emela ntouka,* or "killer of elephants." The semi-aquatic Emela-ntouka is described as more rhinoceros-like than the Mokele-mbembe, with a single horn that protrudes from its head. There are also vague reports of the *mbielu mbielu mbielu,* or "the animal with planks growing out of its back," an animal that resembles a stegosaur.

Most people regard the "African Dinosaur" as a cultural myth. But what if the reports also came from people of different ethnic, cultural, and geographic backgrounds? What if similar reports came from another continent, such as South America, which was attached to Africa during the Triassic Period and possibly even the beginning of the Jurassic Period, two hundred million years ago? This would go a long way toward convincing open-minded scientists of the possibility of sauropod-like animals being alive today. And indeed there are hints that such a creature may exist in South America, beyond the fiction of Sir Arthur Conan Doyle's 1912 novel, *The Lost World.*

Easily the most detailed and dramatic account of such a creature in South America comes from a German traveler named Franz Herrmann Schmidt, whose account was published in the *New York Herald* on January 11, 1911 (see case, pages 224–226). Another traveler, Leonard Clark, was on the Amazon's Perene River in 1946, when he encountered tribes of Indians east of the Ucayali who described seeing huge, plant-eating creatures with long necks in the region.

Equally vague are the allusions to unrecognized beasts in the forests of Bolivia's Madidi. These appear in the writings of the lost

British explorer Colonel Percy Fawcett. Native informants had told Fawcett, who was surveying the jungles for Britain's Royal Geographical Society, of "tracks of some gigantic animal" seen in the swamps along the Acre River, near the intersecting borders of Peru, Bolivia, and Brazil. Further south, according to Fawcett's *Exploration Fawcett,* published in 1953, "some mysterious and enormous beast has frequently been disturbed in the swamps—possibly a primeval monster like those reported in other parts of the continent. Certainly tracks have been found belonging to no known animal—huge tracks, far greater than could have been made by any species we know."

Karl Shuker, in his *In Search of Prehistoric Survivors*, tells of a recent report from South America. In 1975, a businessman from Geneva on holiday in the Amazon supposedly met a 75-year-old guide named Sebastian Bastos, who claimed to have been nearly killed by one of the long-necked, 18-foot-long monsters inhabiting this vast jungle. Several years earlier, Bastos was walking beside a river deep within the rainforest when he heard a tremendous noise behind him. Looking around, he saw an enormous monster rising from the water and ripping apart the canoe he had left behind. Bastos and an Indian friend who was with him ran away. When they looked back, the creature had submerged beneath the river's surface.

During the 1930s, an explorer named Charles Miller returned with reports of a dinosaur from the Merauke subdistrict of Irian Jaya, Indonesia. It was a 30- to 40-foot-long, yellowish-brown, long-necked animal like a diplodocus dinosaur, but it had a tail with a spike and a bony collar like that of a ceratopsian dinosaur. He saw it himself on his honeymoon, noting that it had a line of plates on its back, like a stegosaurus. The animal was called the Row because its hiss sounded like "roow." Miller also discovered a group of still-unknown headhunting cannibals, the Kirrirri, who utilized a "tusk"

(really the tail spike) from the Row. Miller, with his 1939 book *Cannibal Caravan*, along with his wife, Leona, who wrote *Cannibals and Orchids* in 1941, stirred up considerable interest in searching for the Row. However, zoologist Heuvelmans and others felt that their story was a hoax.

In recent years, North America has been the location of several Dinosauria reports and debates. During the 1880s, the discovery of dinosaur fossils in the American West was a media event. Interest rose with the Creationist movement, which backed the reports of the contemporary existence of humans and semiaquatic dinosaurs based on tracks of both having been allegedly found together in 1908 in the limestone beds of the Paluxy River, near Glen Rose, Texas.

Dinosaurs, living ones, had been reported five years earlier in northwestern Canada in the Klondike area of the Yukon Territory. The creature was reportedly bipedal and 50 feet long, with a rhino-like horn on its snout, according to old records discovered by archivist George Eberhart. In *Mysterious Creatures*, Eberhart wrote:

> *In 1903, James Lewis Buttler and Tom Leemore were hunting moose near the mouth of Clear Creek, Yukon Territory, when the three animals they were stalking suddenly took off running as if in a great fright. After discovering the tracks of a huge animal that had left a furrow in the mud 2 feet deep, they followed the trail across country for six miles until it disappeared into a gorge at Partridge Creek. Returning to the Armstrong Creek settlement on the McQuesten River, they met Georges Dupuy, Fr. Pierre Lavagneux, and five Indians, and all decided to head out the next day to look for the animal. After a day's unsuccessful search, they got a good look at it for more than 10 minutes when it came close to their campsite near*

Partridge Creek. Lavagneux claimed to have seen the animal again on December 24, 1907, in the same area when the temperature was −45°F. It was carrying a caribou carcass in its teeth, and left tracks identical to those seen in 1903.

Shuker, Mackal, and others have repeated the report, but, as Shuker observes, "its lack of cryptozoological credibility should hardly come as a great surprise."

CANDIDATES

Mokele-mbembe is clearly a catchall name for several kinds of watery cryptids in central Africa. One is likely to be a marshland rhino, a new species of rainforest rhino, which matches the horned Emela-ntouka reports. But for the rest, before we confront the possibility of a living dinosaur, all possible alternatives must first be seriously considered.

Could Mokele-mbembe be a hippopotamus? Not unless we are talking about a long-necked hippopotamus unknown to science.

Could it be a manatee? Unlikely, as the manatee is a neckless animal not more than 12 feet in length.

Could it be an elephant? To think that experienced local hunters can't recognize a partially submerged elephant is simply insulting.

Could it be the large, soft-shelled turtle, *Trionyx triunguis*? Though it never approaches a 30-foot length, it is certainly a possible explanation for some smaller Mokele-mbembe sightings, especially when seen at a distance, but not for those when the animal was entirely visible out of the water.

And at the risk of explaining one unknown with another, could the Mokele-mbembe be a Waterhorse? The hot, humid marshland of the Congo is about as unlikely a habitat as one can imagine for this creature.

Finally, could it be a large, long-necked lizard? If so, it would have to be a species unknown to science. And its footprint does not match that of a lizard, which normally has five well-developed claws on its feet. Mokele-mbembe tracks show only three—a characteristic of certain sauropods. Sauropods are large semiaquatic saurischian dinosaurs of the suborder Sauropoda, known from the fossil record of the Jurassic and Cretaceous periods.

Biologist Roy Mackal believes that the Mokele-mbembe is a sauropod akin to *Diplodocus* and *Apatosaurus* (formerly *Brontosaurus*). Zoologist Karl Shuker seems to lean strongly in this direction as well.

But there is much to suggest that this entire type is based on a very shaky foundation. When talking about living fossils in his encyclopedic *Mysterious Creatures*, George Eberhart writes: "There is no unambiguous evidence for dinosaur fossils after the Cretaceous-Tertiary boundary."

Darren Naish, a vertebrate paleontologist at the University of Portsmouth and a critic of cryptozoology, has pointed out that Mokele-mbembe "as a swamp-dwelling amphibious sauropod owes itself entirely to outdated restorations of sauropods as hippo-like swamp-dwellers, supposedly adapted for life in marshy environments." Naish takes cryptozoologists to task for linking Mokele-mbembe to the pre-1950 conceptualizations of sauropods, which he notes are incorrect. Today, sauropods are depicted as terrestrial, dryland animals, according to analysts such as Naish and dinosaur theorist Robert T. Bakker. "From the point of view of a contemporary paleontologist," wrote Naish in *Fortean Studies* in 2001, "the cryptozoological view of the Mokele-mbembe is a cultural anachronism, not a zoological one and, accordingly, I and other modern paleontologists have great difficulty in imagining that the Mokele-mbembe could be a sauropod."

Therefore, the reported Dinosauria—if they prove to be real animals—might turn out to be a mix of mistakes, monitors, and mammals, instead of modern dinosaurs.

TYPE:

DINOSAURIA

Descriptive Incident:

DATE: October 8, 1907

LOCATION: Solimões River, Peru

WITNESSES: Franz Herrmann Schmidt and Rudolph Pfleng

ON THE THIRTEENTH DAY OF THEIR JOURNEY OUT OF Bogotá, Colombia, through swamps and jungles, Franz Herrmann Schmidt and his companion, Captain Rudolph Pfleng, encountered a large unknown animal at 5°30' South latitude and 75°5' West longitude, which is just inside Peru.

The day before, they had come across a long valley that had become a shallow lake, where Pfleng had seen through his binoculars some huge tracks onshore "such as the Indians had mentioned."

Later, while paddling across this lake, they realized that something had been browsing the vegetation at a height of 14 feet above the ground. They also found the tracks that Pfleng had seen from a distance. These very large tracks, the size of an elephant's, were made by something that had apparently left, then re-entered, the lake. Elsewhere, they found three sets of tracks, two of which were half the size of the largest ones, as if two juveniles had accompanied an adult.

The next morning, Schmidt, Pfleng, and their Indian guides in the boat came upon more "wallows," including one so fresh that "the mud on the weeds and water plants was still dripping." Suddenly, the monkeys in the area began to shriek, and the men spotted "a large dark something half hidden among the branches" and causing a commotion. The Indians rapidly paddled the boat 100 feet away from shore while the shrieking of the monkeys continued. Then, after ten minutes of silence, with the Indians refusing to get closer and Schmidt and Pfleng with their rifles raised, "the green growth began to stir again."

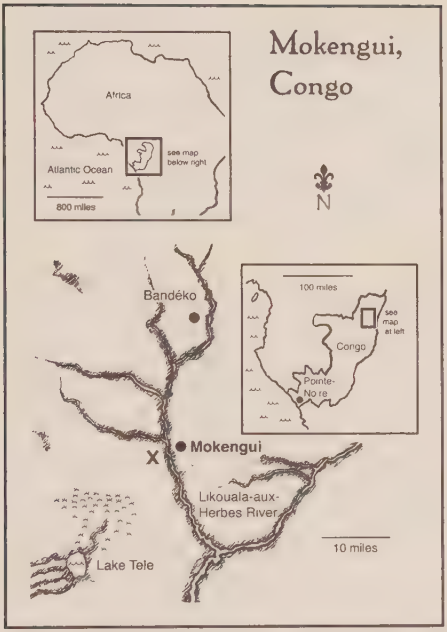
Suddenly, they "beheld the frightful monster," wrote Schmidt. "The head appeared over bushes ten feet tall. It was about the size of a beer keg and was shaped like that of a tapir, as if the snout was used for pulling things or taking hold of them. The eyes were small and dull and set in like those of an alligator. Despite the half dried mud we could see that the neck, which was very snakelike, only thicker in proportion, was rough knotted like an alligator's side rather than his back."

The animal did not seem to notice the men and advanced until it was not more than 150 feet away. "We could see part of the body," wrote Schmidt, "which I should judge to have been eight or nine feet thick at the shoulders, if that word may be used, since there were no fore legs, only some great clawed flippers. The surface was like that of the neck."

When Pfleng began shooting at it, Schmidt fired his rifle as well. Schmidt was certain that several of the bullets hit the creature, but it seemed unharmed. As the creature plunged forward and entered the water, the Indians paddled away furiously. "I looked again only in time to see the last of it leave the land," wrote Schmidt, "a heavy blunt tail with rough horny lumps. The head was visible still, though the body was hidden by the splash. From the instant's opportunity I should say that the creature was 35 feet long, with at least 12 of this devoted to head and neck."

To biologist Roy Mackal, the account, despite its Sunday-supplement style, seemed to ring true. Schmidt named real rivers, real places, and the details of the expedition seem authentic. Of course, the encounter with the creature itself may be little more than a fantasy. Nothing more is known of Schmidt, and by Schmidt's account, Pfleng died of a fever five months later, while still in South America.

Source: Roy Mackal, *A Living Dinosaur?* (Leiden: E. J. Brill, 1987).



TYPE:

DINOSAURIA

Descriptive Incident:

DATE: 1960

LOCATION: Mokengui, Congo

WITNESS: Nicolas Mondongo

NICOLAS MONDONGO WAS 17 YEARS OLD AT THE TIME of this incident, according to biologist Roy Mackal, who interviewed the witness during his 1980 expedition into the Congo. One sunny morning, at about 7 A.M., Mondongo was traveling up the Likouala-aux-Herbes River on a visit to a Catholic mission at Bandéko, where he was born. At one point, he stopped and pulled his dugout canoe out onto the riverbank to hunt some monkeys in the treetops.

Suddenly, the water parted and a strange creature rose out of the river. Since the water was only about three feet deep at that point, most of the animal's body was in plain view. From his vantage point onshore about 36 feet away, Mondongo got an unprecedented view of this strange creature.

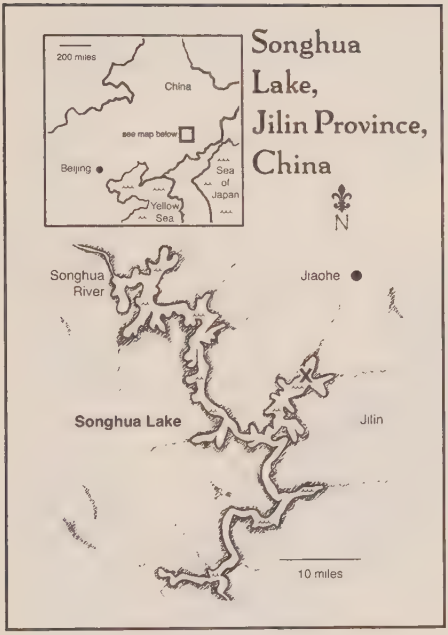
From the tip of its head to the tip of its tail, the animal measured about 30 feet in length. If it had been standing on land, Mondongo estimated it would have been about 6 feet high. Its neck, which was

as thick as a man's thigh and colored reddish brown, and its head, which bore a ridge or the frill-like comb of a rooster, were together about 6 feet in length. Though the head was not much larger in diameter than the neck, Mondongo noticed a clear delineation between the neck region and the back of the head. Its tail might have been longer than its neck, but since the tail was mostly submerged, Mondongo could not be certain.

After being in full view for about three minutes, the creature submerged and was lost to sight.

Just two or three years before Mondongo told Mackal of his encounter, David Mambamlo had seen a Mokele-mbembe in the same part of the river. He was in a canoe when he saw its 6-foot-long head and tapered neck come out of the water a little more than 30 feet away. The upper and breast portions of the animal were gray in color and showed no hair or scales. When Mackal showed him an animal picture book, Mambamlo picked out the neck, head, and mouth of a brontosaurus as being the closest to what he had seen.

Source: Roy Mackal, *A Living Dinosaur?* (Leiden: E. J. Brill, 1987).



TYPE:
DINOSAURIA

Descriptive Incident:
DATE: August 19, 1999
LOCATION: Songhua Lake, Jilin Province, China
WITNESSES: Unnamed Songhua Villagers

TIAN CHAI, OR "HEAVENLY LAKE," IS HOME TO CHINA'S most famous Lake Monster, but in the summer of 1999, most of the action took place in another part of Jilin Province—in nearby Songhua Lake. Sightings of a strange creature in this 125-mile-long man-made lake on the Songhua River actually date back to the 1950s.

For nearly two minutes on the morning of August 19, 1999, villagers observed on the lake a "black-skinned" object, measuring about 7 feet wide and 30 feet long. A local bathing-suit seller took some photographs of the strange creature, but it was so far away that the creature appeared as a mere blurred spot in the photographs.

The merchant claims to have seen the creature eight times during the summer of 1999, beginning in July. On one occasion, it reportedly caused people who were swimming in the lake to leave the

water. And on another occasion, a speedboat driver supposedly got scared and fled after seeing this large black thing moving toward him. One eyewitness, who reported seeing the creature drift by on hot days, claims that it never pulls its head out of the water.

Chinese researchers have actively pursued Lake Monsters in Jilin Province since 1980, when a cow-sized beast with a flat, duck-like beak (an unusual feature bringing to mind the familiar facial structure of the hadrosaurs, or duck-billed dinosaurs) was shot at Lake Tian Chai. Before the advent of the Chinese Communist government, this lake was known as Dragon Lake, thus giving some insight into how the local people felt about the lake and its inhabitants.

Sources: "Lake monster sends Chinese bathers fleeing," *Kyodo News,* Sept. 8, 1999; "Lake Monster Seen in Northeastern China," *Asia Intelligence Wire, Bernama,* Sept. 8, 1999; Karl Shuker, *In Search of Prehistoric Survivors* (London: Blandford, 1996), p. 35.

Mystery Salamander

PHYSICAL CHARACTERISTICS

The Mystery Salamander is a bulky amphibian two to nine feet long with closed gill openings. The best description of a possible specimen noted its dark-brown color and dull yellow spots.

RANGE

The Cryptobrachidae, the giant salamanders, are aquatic and the world's largest forms of these amphibians. They live in swift-flowing freshwaters in three places in the world: China *(Andrias davidianus)*, Japan *(Andrias japonicus)*, and in the eastern United States, from New York to Louisiana and west to Missouri.

We speculate that the Mystery Salamander fills the gap in what was the prehistoric distribution of Cryptobrachidae. The range of the Mystery Salamander is the American West, in fast-moving streams, creeks, and lakes fed by those waters, in pockets of the western mountain ranges of the United States and Canada. The most-often discussed Mystery Salamanders are those of the Trinity-Shasta montane pools, lakes, and linked rivers.

Amphibians are absent from the modern marine environment. No cryptid or known living modern amphibians have ever been reported from, or found to have existed in, salt water, and thus the Mystery Salamanders are exclusively freshwater.

HISTORY

The Mystery Salamander of California's Trinity Alps has a history dating back to the 1920s. Frank L. Griffith was one of the first modern witnesses. He was out hunting deer near the head of the Trinity Alps' New River, when he spotted five salamanders at the bottom of a lake. They ranged from an astonishing five to nine feet long. He caught one on a hook, but he could not pull the salamander out of the river.

After hearing of Griffith's account, biologist Thomas L. Rodgers made four trips in 1948 to try to locate the animals. All were unsuccessful. He speculated that they might be an isolated group of Pacific giant salamanders, *Dicamptodon*, though these never get to be much longer than a foot. Or maybe, he thought, they were a relict

population of *Megalobatrachus*, the Asiatic giant salamander, which measures in the five- to six-foot range. These inhabit swift-moving mountain streams in Japan and China—an environment very similar to the mountain streams of the Trinity Alps where the Mystery Salamander has been reported.

In 1951, herpetologist George S. Myers published an account in a scientific journal of his physical examination of a Californian *Megalobatrachus*, though its provenance is disputed (see case, pages 236–237).

In January of 1960, animal handler Vern Harden of Pioneer, California, claimed that he saw a dozen Mystery Salamanders in a remote Trinity Alps lake called Hubbard Lake. He managed to hook one but had to release it because of a threatening snowstorm. A quick measurement, however, revealed the Mystery Salamander's length: an astonishing eight feet four inches. Though he had no evidence with which to back up his story, he told Stanford University biologist Victor Twitty about it. Twitty commented: "Spectacular, if true."

The person after whom the lake was named, Father Hubbard, had a stronger opinion: "Yes, I know Harden. He's a nice fellow, and I think he ought to write fiction." Father Hubbard was a Jesuit scholar, known throughout the world as the Glacier Priest because of his penchant for climbing the Alps of Europe. He was an explorer, naturalist, photographer, and popular lecturer whose best-known expeditions were all to Alaska and took place during the 1930s. So when Father Hubbard took an interest in the Trinity Alps' Mystery Salamanders, people listened.

Despite Father Hubbard's remark about Harden's credibility, the priest did send Harden to visit his brother, Capt. John D. Hubbard. Father Hubbard noted that although the whole thing sounded fantastic, based on his examination of the growing body of eyewitness reports, he was fairly certain of the reality of the Mystery Sala-

mander. "And next fall we expect to prove it," the 72-year-old Hubbard said at the time, "if I have to lead an expedition from the university myself."

During 1958 and 1959, both Hubbards were associated with expeditions in search of the Mystery Salamanders. In 1960, Father Hubbard stated that he had established the existence of huge amphibians in the Trinity region, but unfortunately, no record of the Hubbard expedition exists. Perhaps it never actually occurred.

Texas oil millionaire Tom Slick, though mainly interested in Bigfoot, also went looking for the Mystery Salamander in 1960. Slick let it be known that he wanted to join the leagues of Mystery Salamander seekers, and he told the members of the Pacific Northwest Expedition to try to find one. They couldn't. Some of Slick's hired Bigfoot hunters became angry with him for what they saw as a silly side trip.

Meanwhile, on September 1, 1960, three zoology professors—Robert C. Stebbins of the University of California–Berkeley, Nathan Cohen of Modesto Junior College, and Thomas Rodgers (mentioned earlier) of Chico State College—left Willow Creek, California, on their own Mystery Salamander expedition. A couple of years later, Rodgers would remember that "10 laymen accompanied them," some of whom mistook logs for Mystery Salamanders. He said that the group collected only about a dozen *Dicamptodon*, the largest of which was no more than 11½ inches long.

The deeply skeptical Rodgers expressed the hope that "this evidence will kill rumors about any Giant Salamanders (much less *Megalobatrachus*) in the Trinity Mountains of California." Rodgers's comments in 1962 ended most zoological interest in the Mystery Salamander of the Trinities.

Until 1997, that is, the year of the Kyle Mizokami Trinity Alps Giant Salamanders Expedition, which retraced Slick's search of Fish Lake and the Trinities. Mizokami is a Japanese-American

writer who has conducted extensive research on American Indian legends of Bigfoot. Like Slick, he had put aside his Bigfoot research to hunt for Mystery Salamanders. And he, too, came up empty-handed.

Mystery Salamander investigations have a healthy history outside of California, too. Natural-history writer Herbert Ravenel Sass and cryptozoologist Mark A. Hall have researched sightings of giant, pink-colored examples of the Mystery Salamander in the eastern and southeastern United States from the 1940s through to the present.

Rupert T. Gould, the first person to systematically investigate sightings of the Loch Ness Monster, noted that "Giant Salamanders" often showed up in reports of what people told him they were seeing in Loch Ness. If one series of mountains in Japan and China has real giant salamanders, and the Trinity Alps might also, then there's a good chance that some of the "fantastic" tales of Lake Monsters in other montane and highland lakes might just be of the Mystery Salamander as well.

CANDIDATES

Perhaps the Mystery Salamanders of the Trinities, if they exist, are American examples of *Megalobatrachus*. The amphibian family to which the Japanese and Chinese Megalobatrachus belongs is Cryptobrachidae. This family has only one known North American member, Cryptobranchus, the Hellbender. At some 29 inches, the Hellbender is the largest known American salamander, but it is much smaller than the 5½-foot length of the Asiatic giant salamanders. Like its cousins in China and Japan, the Hellbender is found in the mountains, namely the Appalachians and the Ozarks.

TYPE:
MYSTERY SALAMANDER

Descriptive Incident:
DATE: 1939
LOCATION: Sacramento River, California
WITNESS: George S. Myers

HERPETOLOGIST GEORGE S. MYERS REMEMBERS WELL his encounter with a Mystery Salamander. It was nearly delivered to him on a silver platter. The animal had been caught in the catfish nets of a commercial fisherman, who called Myers and invited him to look at his remarkable catch. The fisherman let Myers examine the salamander for more than a half hour but would not let him take it.

There was no doubt in Myers's mind that this was indeed a *Megalobatrachus*—the closed gill openings enabled him to unquestionably identify the animal generically. It was a fine specimen, measuring between 25 and 30 inches in length, in perfect condition. But it was distinctly different from the known Japanese and Chinese species. Myers wrote:

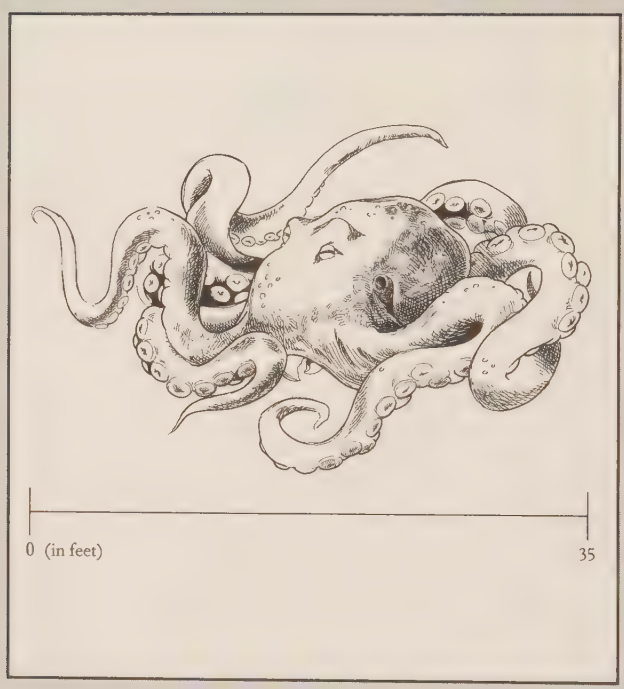
> *The creature exhibited coloration quite at variance not only with that of the several live Japanese examples I've seen but*

also with the published accounts of the color of Chinese specimens. The dorsum was a uniform dark brown, with an irregular sparse sprinkling over all the back of rather well-defined dull yellow spots, these being of irregular outline and about one centimeter in diameter. There were no small spots, darker than the ground color, which is the common color of all the examples of Megalobatrachus I have seen, and the ground color was definitely brownish, not slatey grey. Also it must be emphasized that there was nothing to indicate that the coloration was due to disease. The animal appeared to be in the very best of condition.

Though Myers's description hints at a distinctive American type of *Megalobatrachus,* unfortunately, the source of the specimen was unknown and no other captives have been reported.

In 1962, biologist Thomas L. Rodgers speculated that this California *Megalobatrachus* was only an escaped pet, judging by the fact that a fish fancier had quickly stepped forward to claim the giant salamander as his own. While captive animals do escape, just as common is the shrewd or greedy pet trader who is able to add a unique specimen to his collection by claiming the animal when a story about it appears in the newspaper, as likely happened in this situation. No background check was ever made on the claimant.

Source: George S. Myers, "Asiatic Giant Salamander Caught in the Sacramento River," *Copeia,* No. 2, June 1951.



Giant Octopus

PHYSICAL CHARACTERISTICS

There are more than 100 species of octopus in the world. The largest known species is the giant octopus of the North Pacific, the *Enteroctopus dofleini*. These creatures generally weigh less than 100 pounds, but there are numerous exceptions. "No one knows how big the giant octopus gets," said Fred Bavendam in *National Geographic* for March 1991. "One octopus found off western Canada in

1957 was estimated to be eight feet long, nearly 600 pounds and have an arm span of just over 31 feet, setting a widely acknowledged world record for the Pacific giant."

But the Giant Octopus at issue here is in another league entirely. Its body measures about 20 feet long, perhaps as much as 30 feet long. Its tentacles range from 30 to 75 feet long and anywhere from 10 to 36 inches thick. Based on the several-ton weight of a partial specimen found in Florida, a living specimen would weigh an estimated 20 tons. Its skin color is generally said to be brownish, though its color is likely to change when the creature is aroused. The Giant Octopus may have two lateral fins, as suggested by the remains found on the beach in St. Augustine, Florida, in 1876, and its tentacles are said by some to be covered with "hairs."

Some forms of the Giant Octopus appear to live at a depth of about 1,000 feet and surface usually at night in search of food. Others are clearly benthic, living at depths of 3,000 feet.

RANGE

The Giant Octopus has been reported in Bermuda; in the West Indies, from the Caicos to the western Bahamas and southward to the Yucatán; and possibly in the North Pacific and Indian oceans. Beachings, strandings, and Globster evidence (see pages 276–286) may indicate a nearly global marine distribution.

HISTORY

By some accounts, reports of the Giant Octopus date back to Greek and Roman times, though most authorities have concluded that such references are really to the giant squid, *Architeuthis*. But are they? At the end of a long article on the giant squid, A. S. Packard, Jr., then editor of the *American Naturalist*, wrote in the February 1873 issue, "Reports of a colossal species of octopus are not rare. They can be found in the middle of the Indian Ocean, the Atlantic and the Pa-

cific, and they seem as large as and much more common than squid with 10 arms."

One part of the world—the Bahamas—presents what may be the most impressive evidence for the existence of the Giant Octopus. Perhaps the earliest account of what may be a Giant Octopus in this region comes from the Italian Pietro Martire d'Anghiera, the author of Columbus's biography. In his book *De orbe nova* (circa 1500), he describes a "Monster" that came out of the sea and grabbed one of the Spaniards sleeping on the beach, finally disappearing back into the sea with its prey before the man could be helped. Though the monster was not described, Michel Raynal, perhaps *the* expert on the subject of the Giant Octopus, notes that "it should be an octopus, the sole big marine animal, apart from pinnipeds (seals), which can venture on land."

The fishermen of the Bahamas refer to these animals as "Giant Scuttles"—scuttles being the Bahamian word for octopus—or as *lusca* (or *lucsa*). According to local tradition, the Lusca is nicknamed "Him of the Hairy Hands," which is perhaps a reference to the fringes of cirri of ciliated octopuses, which look like hairs.

Some researchers believe that the "blue holes" of the Bahamas may be the home of the Giant Octopus. The term "blue holes" refers to the thousands of aquatic caverns and circular openings in the vast limestone plateau that lies around the Bahamas. After examining these blue holes, the explorer Jacques-Yves Cousteau wrote that the natives "believe that the holes—which they consider to be 'bottomless'—are inhabited by monsters; by evil spirits, known as *lusca*, which are always ready to drag men and their boats down into the bowels of the earth. These monsters resemble giant octopuses . . ."

In a book about the octopus, Cousteau wrote about strange encounters that supposedly take place off the Bahamas: "Fishermen reported having their lines broken by an enormous animal which,

when sighted, resembled a squid." Cousteau organized an expedition to photograph these animals, but the only successful sequence of photographs showed "an indefinable stretch of brown flesh," which is consistent with the color of the skin of an octopus, rather than that of a squid, which is red.

In a book called *Les requins se pechent la nuit (Sharks Are Caught at Night)*, published in 1957, François Poli recounts several incidents that took place off the coast of northeastern Cuba involving broken fishing lines and giant tentacles that suggest the involvement of a Giant Octopus. In addition, he says that fishermen

> *spoke of giant octopuses of the Caribbean Sea, the spread of which could reach about [50 feet], able to drag down their [20-foot]-long boats, and even to seize a fisherman with one of their tentacles and to swallow him. These monsters never came to the surface, they said, except on certain nights of a full moon where they floated for some minutes in the dark, their phosphorescent eyes on the surface.*

Raynal believes that "these nocturnal habits may be related to the quest for food. It should be remembered that spiny lobsters are also nocturnal, and we have reason to think that the giant octopus feeds on benthic crustaceans."

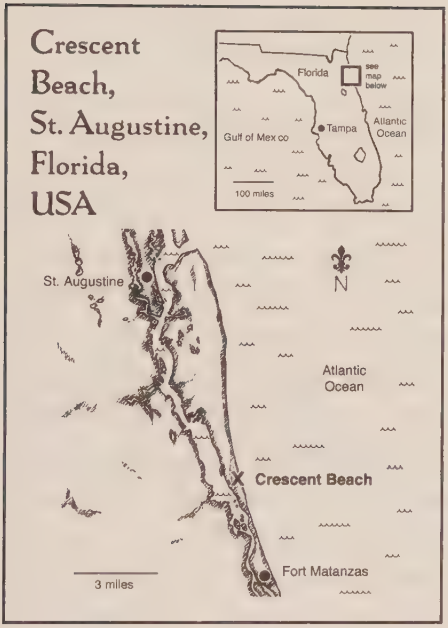
Reports of the Giant Octopus are scattered throughout the last century, including some from the mid-1980s that led to an expedition in search of the creature. On one occasion, in 1984, John P. "Sean" Ingham was fishing for big *Geryon* crabs in his 50-foot boat, when he lost several crab traps at a depth of 3,000 feet after a considerable strain on the cable. A biologist at the National Marine Fisheries in Pascagoula, Mississippi, named Bennie A. Rohr suggested that the crabs had been eaten by a Giant Octopus. The following year, a similar incident occurred, but this time Ingham was

able to haul up his trap. As it approached the surface, he saw a large mass with tentacles around the trap. When he tried to hook it, it kept pulling through the tissue. In the end, he did manage to recover one 50-pound piece. When shown a photo of the piece, however, scientists at the Smithsonian were unable to identify it. On another occasion, in 1984, Ingham had his boat towed by a creature that left a 50-foot-high pyramidal shape on his sonar.

These incidents led James Plaskett to undertake a three-week search for the Giant Octopus in Bahamian waters in August of 1999. The venture was funded by Cliff Stanford, founder of Demon Internet, and used rope-cams, a camera package that could be dangled over the side of a boat to take shots thousands of feet down. Plaskett used up to three rope-cams positioned six feet or so above crab traps baited with fish, similar to those Ingham had used when he had had his encounter. But the largest animal they filmed was a 15-foot, 6-gilled shark. Teddy Tucker, the Bermudian whose boat and services Plaskett had hired, suggested that a shark might have been responsible for Ingham's strange towing adventure. He was also skeptical that a mid-1980s sonar could yield a precise image of a 50-foot pyramidal shape at a depth of more than 3,000 feet.

CANDIDATE

The Giant Octopus is often described as being squid-like in some aspects. For this reason, Michel Raynal speculates that rather than being a simple large octopus, the creature is actually a gigantic cirrate octopod. Such an identification would explain both the presence of lateral fins and the reports of the creature's "hairy arms," a reference perhaps to the fringes of cirri, which look like hairs, along the rows of suckers of the ciliated octopuses. Professor A. E. Verrill of Yale first advanced this hypothesis of a creature related to Cirroteuthis for the remains found at St. Augustine. In 1987, Raynal proposed the name *Otoctopus giganteus*.



TYPE:

GIANT OCTOPUS

Descriptive Incident:

DATE: November 30, 1896

LOCATION: Crescent Beach, St. Augustine, Florida

WITNESSES: Herbert Coles, Dunham Coretter, DeWitt Webb, and dozens of others. Specimen retrieved.

TWO YOUNGSTERS, HERBERT COLES AND DUNHAM Coretter, were bicycling on St. Augustine's Anastasia Island when they came across a huge carcass partially buried in the sand near Crescent Beach. DeWitt Webb, founder of the St. Augustine Historical Society and Institute of Science, got wind of the find, which he presumed to be a whale. The next day, he examined the visible remains of this creature, which measured 23 feet long by 4 feet high, and 18 feet across at its widest. He concluded that the creature, which had been beached for a number of days prior to its discovery and was in a poor state of preservation, was actually a Giant Octopus.

After bad weather delayed further examination for almost a week, two photographers accompanied Webb and took numerous photographs. One shows what looks like the proximal stumps of five tentacles. A few days later, a Mr. Wilson reported to Webb that he had found several fragments of the tentacles, one as long as 23

feet, scattered to the west and south of the body. But Wilson was alone at the time, and a storm washed the carcass—and the tentacle fragments, presumably—back into the sea, though the carcass was later found beached again two miles farther south.

Webb wrote letters about the discovery to several scientists, one of which reached A. E. Verrill of Yale, who at first thought the creature was a giant squid. When shown additional information and photographs, Verrill changed his mind and in early 1897 designated the creature *Octopus giganteus*. From the 6 tons of remains, he estimated that the creature originally had a girth of 25 feet and tentacles 75 feet in length. Webb also provided information to William Healey Dall, curator of mollusks at what would later be known as the Smithsonian in Washington, D.C., but neither he nor Verrill made any effort to inspect the carcass in person.

By the beginning of February, Webb had managed to cut four pieces from the carcass and preserved them in formaldehyde. He sent tissue specimens to Verrill and Dall for analysis. After examining them, Verrill reasoned that, although they contained little oil, the samples resembled the blubber of some cetaceans and therefore could not be tissue from an octopus. He retracted his earlier conclusion and published the fact that the found mass was probably the upper part of the head and nose of a sperm whale.

No further work was done on the samples until 1957, when F. G. Wood, a senior scientist and consultant with the Ocean Sciences Department of the Naval Undersea Research and Development Laboratory in San Diego, accidentally came upon an old newspaper clipping, which described the remains and Verrill's original conclusion that it had been a Giant Octopus. Wood managed to track down the fact that the Smithsonian possessed a large jar of preserved tissue bearing the name *Octopus giganteus Verrill*.

Wood contacted a friend, Joseph Gennaro of the University of Florida, who had been working on octopus at the Marineland Labo-

ratory and managed to obtain a sample of the tissue for examination. Gennaro then prepared samples from the "Giant Octopus" for histological analysis, along with control samples of known squid and octopus. No fine cellular structure was visible in the mystery sample, as it would be if it had been from a mammal like a whale, nor was its structure typical of a squid or octopus.

But when Gennaro compared connective tissue patterns, he found the means to identify the mystery sample. In the known octopus samples, broad bands of parallel and perpendicular tissue alternate. In the squid samples, thin perpendicular regions separate broad bands of parallel fibers. In the mystery sample, there were two broad bands of parallel fibers with an equally broad band of more or less perpendicular fibers between them. This was not a squid. Nor was it whale blubber. "The evidence appears unmistakable that the St. Augustine sea monster is in fact an octopus," said Gennaro.

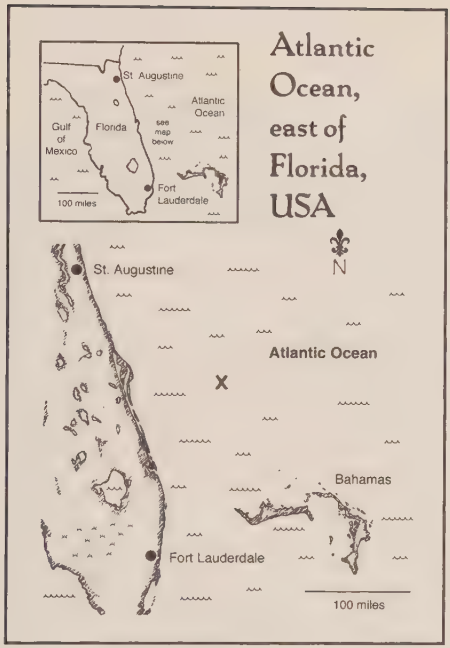
Gennaro's conclusion, published by Wood in *Natural History* magazine in 1971, was first ridiculed then ignored. A decade and a half later, biologist Roy P. Mackal of the University of Chicago analyzed the mystery tissue again. The well-known cryptozoologist's conclusion that they came from a "gigantic cephalopod, probably an octopus, not referable to any known species" did little to settle the doubts of skeptics, who would have their say some years later.

In 1995, four scientists from the University of Maryland at College Park and one from the Faculty of Medicine at Indianapolis did their own study of the amino acids from the carcass tissue. They found that the animal could not have been a Giant Octopus—or any invertebrate, in fact—but was probably a whale. Their conclusion, published in the April issue of *The Biological Bulletin*, held that the remains were nothing more than the skin collagen from the blubber of a cetacean.

Their study was widely disputed. The French cryptozoologist

Michel Raynal found many methodological problems with the study and deemed their conclusions "complete nonsense." Even marine expert Richard Ellis, normally a skeptic on matters cryptozoological, rejected their conclusion.

Sources: Michel Raynal, "The Case for the Giant Octopus," *Fortean Studies,* Volume 1, 1994; Michel Raynal, "Update on the Giant Octopus Controversy," *Fortean Studies,* Volume 3, 1996; Michel Raynal, Virtual Institute of Cryptozoology, http://perso.wanadoo.fr/cryptozoo/; Sydney K. Pierce, Gerald N. Smith, Timothy K. Maugel, and Eugenie Clark, "On the Giant Octopus (*Octopus giganteus*) and the Bermuda Blob: Homage to A. E. Verrill," *The Biological Bulletin,* 188, April 1995, pp. 219–30; Forrest Glenn Wood, "Stupefying colossus of the deep," *Natural History,* Vol. 80, March 1971, pp. 15–16, 18, 20–24.



TYPE:

GIANT OCTOPUS

Descriptive Incident:

DATE: March–April, 1941

LOCATION: Atlantic Ocean, east of Florida

WITNESSES: John C. Martin and crew

IN 1971, JOHN C. MARTIN, THEN RETIRED FROM THE U.S. Navy, wrote to marine biologist Forrest Wood about an encounter he had had 30 years earlier. He was serving as a coxswain in the First Division aboard the USS *Chicopee* A0-41 at the time. The ship had left Baton Rouge, Louisiana, for Portland, Maine, with a cargo of aviation gasoline and fuel oil.

The ship was steaming off the coast of Florida in the area of Fort Lauderdale and St. Augustine when they saw something directly ahead of them on the surface of the water "which could not be readily described." From a distance, it looked like a huge pile of brown kelp seaweed, but as they approached, there was "no doubt" of its identity. "The coils of its arms were looped up like huge coils of manila rope," wrote Martin. "However, the coils were over 36 inches in circumference . . ."

Martin's estimate of the size of the creature, 30 feet in diameter, probably refers to the octopus's "umbrella." Its arms, he estimated, were also about 30 feet in length. They were "coiled but moving slowly."

These measurements are in the same ballpark as those of the remains of the creature found on the beach at St. Augustine 45 years earlier.

Source: Gerald L. Wood, *Guinness Book of Animal Facts and Feats* (Enfield: Guinness Superlatives Ltd., 1976).

Afterword

Lake Monster Survey

According to our estimate, almost 1,000 lakes and freshwater locations around the world harbor large, unknown animals unrecognized by conventional zoology. In this section, we conduct a continent-by-continent survey of reported locations where the freshwater cryptids are seen, with a brief overview of some of the more celebrated creatures.

NORTH AMERICA

Canada

Canada has several native Lake Monsters, the most famous of which is Ogopogo of Okanagan Lake in British Columbia. The First Nation Canadians called these creatures *naitakas.* The earliest white settlers saw them beginning in the 1860s. Ogopogo is described as log-like, about 40 feet long, with dark-green, black, or brown skin, and a prominent horse-like head; it also has flippers, a split tail, and sometimes serrations on its back and/or a mane on its head. British Columbia also lays claim to an unnamed creature lurking in the depths of Cowichan Lake north of Victoria. But the monster of

Thetis Lake, which was seen repeatedly in 1972, is more likely an aquatic primate or Merbeing, and not a traditional Lake Monster.

Traveling west to east, Manitoba has Manipogo, an Ogopogo look-alike in Lake Manitoba. This black-brown, 30-foot-long creature was the object of a 1957 expedition. The chair of the department of zoology at the University of Manitoba, James McLeod (not to be confused with the other Professor James McLeod who investigates Paddler in Idaho) led two expeditions in search of Manipogo in 1960. A 1962 photograph of Manipogo that shows a long and dark animal with a swan-like neck dipping back into the water is still unexplained, if it is not a hoax. John Kirk points out in his *In the Domain of the Lake Monsters,* published in 1998, that routine sightings of Manipogo seem to have ceased after 1962.

The Lake Monster of Lake Winnipegosis, Manitoba, is called Winnipogo. An unusual bone, apparently a spinal vertebra, was found sometime in the 1930s on the shore of this lake, but was later lost in a fire. McLeod of the University of Manitoba has investigated the Winnipogo sightings as well, and Loch Ness Monster investigator Roy Mackal finds the reports of this creature worthy of serious consideration. This creature should not be confused with the same named Winnipogo of another lake in Manitoba, Lake Winnipeg.

Lake Simcoe in Ontario is the site of a monster that the locals call Igopogo. Sightings of the creature, described as a large "dog-faced" animal, have been reported for more than a century. It is often seen in Kempenfelt Bay, near Barrie. In 1991, Igopogo was captured on video swimming around the southern end of the lake. At about the same time, a similar-looking monster was caught on film in Muskrat Lake, Ontario. Sightings at Muskrat Lake date back at least to 1916, including some of the creature seen onshore. The residents of the area call it Mussie or Hapyxelor. Both the Simcoe and Muskrat Lake Monsters are usually described as about 20 feet long, gray, and look-

ing like giant seals with strange heads. But in the case of Muskrat Lake, some witnesses describe Mussie as looking like a dolphin or a duck-billed dinosaur. More than one unknown animal apparently exists in Muskrat Lake.

Quebec has more than 20 lakes supposedly inhabited by cryptids. Skeptics believe that these "monsters" are actually logs, large fish, and other misidentifications, as well as folklore, especially for reports coming from the smaller lakes. In discussing Quebec's Lac Massawippi, which in Abernaki means "deep water," Paul Simard, vice president of the Massawippi Fishing and Game Club, told researchers that when he was fifteen his parents told him and his thirteen siblings not to go swimming far into the lake "because there was a Monster in the lake." During the 1920s, people were actually afraid to go fishing because of the Serpent of Lac Massawippi. The creature is said to be six or seven feet long and have the head of a catfish. Giant catfish may well be the source of some Lake Monster stories. The Lac Brompton Monster of Quebec, known as "Champ's Younger Brother," is also said to be some six feet long, has "an evil-looking head," as well as "something like a moustache." Could this "moustache" refer to the wattles of a giant catfish?

Waterhorse-like creatures appear in two Quebec lakes, Ponik of Lac Pohénégamook, supposedly one of the ugliest-headed monsters around, and Memphré of Lac Memphrémagog. The earliest recorded sighting of Memphré, Quebec's "most active" Lake Monster, took place in 1816, with the most recent dating to 1997. (Lake Champlain, which is partially in Quebec, is discussed in the United States section of this survey.)

The monster of New Brunswick's Lake Utopia is called Old Ned. First reported in the 1800s and still being seen today, Old Ned appears to be a Classic Sea Serpent in an inland lake. A wood engraving from the nineteenth century shows a long animal with a large, round head and a mouth full of big teeth. Old Ned reportedly

breaks holes in the surface of the frozen lake during the colder winters. The lake is only miles away from the Atlantic Ocean, and just a stone's throw from a natural channel into the Bay of Fundy. One of the more dramatic sightings at Lake Utopia occurred in July of 1982, when Sherman Hatt saw a creature, which he said resembled "a submarine coming out of the water with spray on both sides. It was about ten feet long and put me in mind of the back of a whale."

United States of America

The United States has a long tradition of Lake Monster legends, from the East to the West and the North to the South, and from the folklore of its first residents—the Native Americans—to sightings in the twenty-first century.

In the far north, Alaska's Iliamna Lake, 80 miles long, hosts monsters with broad, blunt heads; long, tapered bodies; and vertical tails. Witnesses compare the monsters' color to "dull aluminum." The Aleut Indians have known of these creatures for years and display a healthy respect for them. Earlier in the century, according to Aleut testimony, a monster upended one of their boats and attacked a member of the crew. Recent sightings have included good views of these giant fish from airplanes flying over the lake (see case, pages 141–144).

Some U.S. Lake Monsters appear to have mundane explanations. As mentioned earlier, when a huge white sturgeon *(Acipenser transmontanus)* was found dead on the shore of Lake Washington in 1987, wildlife officials felt that they had caught the culprit responsible for stories of a duck-eating monster in the lake. But since the mouths of sturgeon are not biologically constructed for eating ducks, perhaps "the real" monster still exists in Lake Washington.

Lake Tahoe in California-Nevada calls its monster Tahoe Tessie, or simply Tessie. While Washoe Indian legends tell of monsters inhabiting the lake, skeptics claim that Tessie witnesses are mistaking logs or waves for Lake Monsters. The Tahoe Research Group,

headed by Professor Charles Goldman and involving other scientists from the University of California Davis, came to the lake in 1984 to investigate Tessie—but with inconclusive results. Bob McCormick, who thinks Tessie may be a sturgeon, says that witnesses "see something long, very long, usually at least 20 feet long, that moves in the water; it's very dark, smooth; it rolls through the water." Local author John Roush also holds that Tessie is a rogue giant sturgeon.

In the early 1940s, near Coeur d'Alene, Idaho, Lake Monsters—or at least reports of them—began to show up at Lake Pend Oreille. Typically, the sightings were of a large, not clearly visible object moving rapidly through the water. Before long, monster stories became so frequent that locals gave the creature a nickname: Paddler. James R. McLeod of North Idaho College and his college-based cryptozoological research group conducted a much-publicized investigation of Paddler in 1984. They concluded that a majority of the sightings could have been of a huge sturgeon. But the U.S. Navy's presence at the lake, where it has a top-secret submarine sonar research facility, has raised suspicions that the Navy might be either responsible for the Paddler sightings or using the sightings to cover their own activities at the lake.

Elsewhere in Idaho, Payette Lake, said to be an astonishing 3,900 feet deep in places, is the site for stories of Sharlie or Slimy Slim. The creature was so well-known in the 1940s that even *Time* magazine carried a report on it on August 21, 1944, saying that it was 35 feet long and carried its snub-nosed crocodilian head about 18 inches above the water. But in the 1960s, according to zoologist Ivan T. Sanderson, the sightings of Slimy Slim described a much different, long-necked creature.

For years, the long-necked creatures that inhabit Lake Waterton in Montana have been known as Oogle-Boogles, though no one knows just how that name got started. Flathead Lake, in northwestern Montana, boasts beasts 5 to 60 feet in length. Some of the mon-

ster encounters appear to describe sturgeon, while others describe a Nessie-type creature. Since they were first observed in 1889, the state's Department of Fish, Wildlife and Parks has recorded 78 sightings, with 1993 seeing a near-record 11 cases. Jim Vashro, the regional fisheries manager for the Department of Fish, Wildlife and Parks in Kalispell, says that no fewer than 25 of the sightings fit the description of a white sturgeon, while the other 53 reports generally describe a "snakelike or eel-like" creature "greater than 10 feet long"—even up to 60 feet long—and characterized by "humps and smooth skin." These inconsistencies are enough to give any conscientious researcher a severe headache, but says Vashro: "Something certainly seems to be going on. Very credible people have seen something variously described as a large fish or some kind of monsterlike creature, usually quite long in length."

Consistency is not a virtue of most Lake Monster lore from the American West, or as we have seen, from Quebec. It does not necessarily follow, however, that these Lake Monsters are not real. Eyewitnesses are sincere and stand to gain little, aside from ridicule, for coming forth with their sightings. Take for example, the monster black fish about six to eight feet long with no visible appendages, which rammed a fisherman's boat and dented its fiberglass body one day in the summer of 1970. Ronald J. Haller was floating down the Missouri River between Fort Benton and Lewistown, Montana, when the collision occurred. Haller swung his boat around and filmed the fish moving upstream with his camera. To the best of our knowledge, Haller's film has never been released, but the witness and his lawyer are known to have shown it to wildlife authorities, who were never able to identify the creature.

In the American Midwest, a striking beast figures in the legends of the Indians of Nebraska, who told the first white settlers that a horned monster lived in Alkali Lake, now known as Walgren Lake, near Hays Springs. The accounts seem to hold some truth, if we are

to credit the testimony of one J. A. Johnson. Quoted in the July 24, 1923, *Omaha World-Herald*, Johnson said that he had seen the creature during the fall of 1922 with two associates and knew of 40 others who had seen it. The animal was about 40 feet long, including tail and head, which it raised out of the water. "In general appearance," Johnson remarked, "the animal was not unlike an alligator, except that the head was stubbier, and there seemed to be a projection like a horn between the eyes and nostrils. The animal was built much more heavily throughout than an alligator. Its color seemed a dull gray or brown. There was a very distinctive and somewhat unpleasant odor noticeable for several moments after the beast had vanished into the water." The gray-brown creature reportedly fed on livestock and gave off dreadful roars.

During one stretch of the nineteenth century, Lake Michigan also claimed a mysterious watery inhabitant. The August 7, 1867, issue of the *Chicago Tribune* noted that "Lake Michigan is inhabited by a vast monster, part fish and part serpent," whose existence was no longer in doubt. The *Tribune* reported that crews of the tug *George W. Wood* and the propeller boat *Sky Lark* had recently seen the creature lashing through the waves off Evanston, Illinois. They said that the thing was between 40 and 50 feet long and had a neck as thick as a human being's and a body as thick as a barrel. A century later, a few sightings still occur on Lake Michigan. On the morning of August 6, 1987, fisherman Joseph Muhike reportedly encountered the same, or a similar, animal on the lake a mile and a half from the Hyde Park section of Chicago.

During the summer of 1879, another monster appeared in Illinois, this time in Stump Pond in DuQuoin. One night, a man named Paquette was fishing on the lake when something rushed through the water and created enough of a wake to rock his boat. Unnerved, Paquette headed for shore, vowing not to venture out on the water again during the late hours. A year later, in July 1880, two miners re-

portedly saw a 12-foot "serpent," its body the thickness of a telegraph pole and dark-green in color, heading their way from an eighth of a mile away. Reports of a monster in Stump Pond continued until 1964, when the body of water was partially drained and its fish cleared out with electric stunners. The largest fish weighed 30 pounds; impressive as fish go, but certainly not big enough to be mistaken for anything else. Despite the lack of a monster, witnesses stuck to their stories. One of them was 66-year-old Allyn Dunmyer, whose boat had nearly been tipped over by something that had struck its bottom several years before. "I've seen them so near the surface that their back fins were sticking out of the water," he was quoted as saying in an article in *Fate* in 1965.

The creature observed in Michigan's Paint River in 1922 had a head bigger than a pail and about six humps sticking out of the water. One witness said: "It was swimming north up the river between two bridges. This distance could be the length of a city block, and this monster must have been nearly half of that bridge, but we followed its wake on up the river."

The Monster of Big Chapman's Lake, near Warsaw, Indiana, has also made only one known appearance. On August 16, 1934, H. W. Scott was fishing from a boat when a head two feet across with "large cow-like eyes" rose out of the water. We assume that the head was attached to a body, but that, unfortunately, is the extent of the description given in an *Indianapolis News* account of the sighting. The same source lists two other witnesses, Scott's wife and a Mrs. George Barnwell, who allegedly saw the creature at about the same time.

An unknown water beast in the Midwest does not have to look like a Nessie to be called a "Monster." Centuries-old legends from native sources conjure up encounters with giant "reptiles" sporting great horns. In "Water-Monsters of American Aborigines," which appeared in the *Journal of American Folklore,* 1889, Albert S. Gatschet surveyed stories of these peculiar aquatic beasts, including

the Great Horned Reptile and the Horned Snake of the Ohio River region. When the Creeks lived in Tennessee, they spoke of a large-horned snake-like animal, which frequented deep water holes. The Horned Snake was brought to the shore by the magical singing of Creek elders. When the creature showed its horn, the Indians would cut it off. The horn was then taken as a fetish and carried into war to ensure success in battle.

Turning to the East, one of the earliest Lake Monster tales related by David Cusick is found in a pamphlet, *History of the Six (Indian) Nations,* a collection of accounts from the Oneida branch of the Tuscaroras, published in 1828. One tells how, long ago, a great reptile called the *mosqueto* rose from Lake Onondaga, near Syracuse in upstate New York, and slew a number of people. The Indians also said that "2200 years before the time of Columbus," a great horned serpent appeared on Lake Ontario and killed onlookers with its overpowering stench.

The best-known Lake Monster in the United States is undoubtedly Champ, the singular name given to the creatures that inhabit Lake Champlain in the Champlain Valley of Quebec, New York, and Vermont. The first white man to see it, according to Champ history, was the lake's namesake, explorer Samuel de Champlain, who in July 1609 observed a serpent-like creature about 20 feet long, as thick as a barrel, and with a head shaped like a horse's. (Today, there is little doubt that what the explorer saw was a sturgeon.) Then, on July 24, 1819, according to accounts published in the *Plattsburgh Republican,* a beast alarmed pioneers as it stuck its head above the surface of Bulwagga Bay, near what is now Port Henry, New York.

Champ's fame was sealed a century and a half later when Sandra Mansi, a 34-year-old tinsmith and amateur photographer, snapped an impressive photograph of the Waterhorse on July 5, 1977 (see case, pages 114–116). Due in part to the interest generated by the Mansi photograph and a cryptozoology symposium on the shores of

Lake Champlain in the summer of 1981, Champ became the focus of resolutions passed the following year by the Vermont House and the New York Senate, protecting the lake's monsters "from any willful act resulting in death, injury or harassment."

While Lake Monsters make only infrequent appearances in the East—from the Chain of Lakes in Maine to the St. John's River, home of Pinky, in Florida—Champ continues to be seen regularly in Lake Champlain. In fact, as recently as September 8, 2002, Dennis Hall of Champ Quest took an exciting new video that seems to show three Lake Monsters swimming back and forth on the surface of the lake near the mouth of Otter Creek at Ferrisburgh, Vermont.

SOUTH AMERICA

The Lake and River Monsters of South America usually fall into one of three categories—those of the Patagonian Plesiosaur, the Iemisch, and the Giant Anaconda.

The creature of Nahuel Huapí Lake in Argentina is called Nahuelito (see case, pages 119–121), but is sometimes referred to as the Patagonian Plesiosaur. This creature first attracted press coverage in the 1920s, though sightings date back well into the previous century. Blanco Lake in Argentina is also associated with reports of the Patagonian Plesiosaur. Though little known elsewhere in the world, Nahuelito is something of a cryptozoological celebrity in South America.

The Iemisch, the second category of South American Lake Monster, is said to be a "water tiger," or otter-like animal. It is found in many places from northern Argentina to the lakes on the eastern slopes of the Andes Mountains in Chile.

Sightings of the Giant Anaconda, the third category of South American Lake Monster, are largely confined to Brazil. Reports of

these giant serpents (or landlocked "Sea Serpents") date back to the 1800s; they have been seen in the Rio Abuna, the Amazon River, and the Rio Mármore. As often happens in regionalized names, the handy moniker "Anaconda" probably has nothing to do with the actual animal involved with these sightings.

Of special note is an unknown freshwater Mystery Sirenian seen in Bolivia's Lake Titicaca (see page 188). It is often incorrectly referred to as the Lake Titicaca Seal.

English language media tend to ignore reports of unknown creatures from South America, just as they do most other kinds of stories coming from this part of the world.

AFRICA

For hundreds of years, stories of surviving dinosaurs in the jungles of central Africa have tickled the fantasies of the English-speaking world. The first printed reference, in a 1776 book, relates Abbe Proyhart's discovery of giant, clawed animal footprints in west-central Africa, tracks that he claimed were three feet across. In 1913, a German expedition in the Congo met a band of pygmies who described an animal they called *mokele-mbembe,* which means "one who stops the flow of rivers" (see pages 212–222). They said that this beast was about the size of an elephant or hippopotamus, with a long, flexible neck and a long tail like an alligator's. This description is consistent with a sauropod or other small dinosaur.

While Lake Tele and the Likouala swamps of the Congo have been the focus of most expeditions to find these aquatic monsters, in recent years, the nearby swamps of Cameroon have been the center of attention. The Mokele-mbembe has been reported in six major rivers in Cameroon, as well as in various small bodies of water called "pools." The Central African Republic and Chad have re-

ports of similar cryptids called Mourou-ngou, as does Angola and Zambia, where they are known as the Chipekwe. The existence of dinosaurs in central Africa is unlikely, but not a total scientific impossibility. According to cryptozoologist Karl Shuker, "If dinosaurs could exist unknown to science anywhere in the world, the Likouala is where they would be."

Zoologist Bernard Heuvelmans was interested in the Lau, the freshwater monster of East Africa, particularly from the Sudan, and thought they were giant catfish. This animal resembles the Lukwata reported in Lake Victoria in Uganda, Tanzania, and Kenya, and is another probable giant catfish.

EUROPE

The ancient histories of Europe contain some of the oldest accounts of Lake Monsters available to researchers. For example, reports of the Icelandic Lake Monster known as "the serpent of Lagarfljót," or the Skrimsl, date back to 1345. The Skrimsl is described as a pale, humped animal, almost 50 feet long, and sporting whiskers on a head at the end of a six-foot-long neck. The most recent sighting took place in 1998, when a classroom of students and their teacher saw the Skrimsl close to shore at Geitagerdi.

In Ireland, the local lough creatures are known as Péistes. Typical is the long-necked, one-humped Péist, seen at Lough Ree for decades. Three Dublin priests saw a Péist off Holly Point on May 18, 1960, and researchers Jan-Ove Sundberg, Nick Sucik, and Espen Samuelsen detected what they thought was a Péist on sonar in 2000.

In the United Kingdom, Loch Ness is the focus of attention when it comes to Lake Monsters (see pages 18–22), though Kelpies, Waterhorses, Water-bulls, and other Lake Monsters are said to inhabit several other Scottish lochs.

In Scandinavia, Lake Monsters have been seen and encountered for hundreds of years. Lindorms, meaning "dragons" in Swedish, are today's Lake Monsters of Scandinavia. A late-nineteenth-century survey of reports of such a creature from Storsjön, the deep mountain lake in central Sweden, convinced Peter Olsson that these creatures should be taken seriously. Today, Jan-Ove Sundberg's Global Underwater Search Team continues the hunt for Sweden's and Norway's freshwater monsters.

In Central Europe, specifically in Germany, Austria, Switzerland, and northern Italy, there is a long tradition of Lake Monster reports involving giant catfish, dragons, and huge fish with saw-tooth dorsal backs. From Belgium's Meuse River come reports of Maasie, from Normandy's Seine River of Gargouille, from Siracusa in Sicily of Colovia, and from the Rhine River of crocodilians (see case, pages 167–168).

And from Russia, which is geographically a part of Europe, come reports of a large creature in Lake Brosno. In 1966, residents of Benyok, 250 miles northwest of Moscow, spotted the creature and took a photograph of their local monster, Brosnie. The large-eyed, 13- to 16-foot beast has a history that goes back at least to 1854. In recent headlines, news reports called it Russia's Nessie, even though it resembles a giant sturgeon.

ASIA

From Japan, we have reports of traditional Lake Monsters named Issie and Kushi as well as its Kappa. The three-humped Lake Monster seen in Tya-ko in the Hokkaido in February 1978 is a good example of a Japanese Nessie-type creature.

Siberia, located in the boreal forests of northern Asia, reflects a pattern of Long Neck Waterhorse reports similar to those found

across North America. In the 1950s and 1960s, a black, long-necked creature that snorted and ate reindeer and waterfowl was seen frequently in Lake Labynkyr, a nine-mile-long, 200-foot-deep freshwater lake. During the same time period, Lake Vorota hosted a roaring, nearly black beast more than 30 feet long, with a six-and-a-half-foot-long neck and a dorsal fin. Soviet scientists fielded expeditions to both Vorota and Labynkyr in 1963 and 1964, and reported seeing humps of an unidentified animal near the shore of one of these lakes (official documents do not specify which lake).

The most famous Siberian Lake Monster, however, is the long-necked creature seen in Lake Khaiyr in the 1960s. Biologist Nikolai Gladkikh spotted it eating grass near the shore (see case, pages 104–105), and his drawing clearly showed a typical Nessie-type animal with rather more rigid body parts. During the 1990s, a 21-foot creature with a sheep-like head was seen at a lake near Sharypovo, and a giant serpent was said to live underground near Lake Toni, Siberia.

Duck-billed dinosaurs serve as the model for a few Lake Monsters in China. Take, for example, the 1980 descriptions of the Lake Tian Chai Monster, a big, long-necked creature topped by a rather square head and a flat duck-like beak; these bring to mind the hadrosaurs, the duck-billed dinosaurs of prehistoric times.

Vietnam appears to be the home of some Giant Turtles (see case, pages 181–183). The Hoan Kiem Turtle has been seen so frequently in Hanoi's Hoan Kiem Lake that newspapers in 2002 called it Vietnam's Nessie.

Then from the Apa Tani Valley and Dafla Hills of India come the older reports of a creature called the Buru (see case, pages 209–211). This large, unknown monitor lizard is said to have lived in the remote valleys of northeastern India. Reported routinely during the 1940s, Burus were generally said to look like 20-foot aquatic versions of the Komodo dragon.

From the Van Province of Turkey, we have the saw-tooth-backed Lake Van Monster. This cryptid has been seen from the shoreline towns of Edremit, Van, Resadiye, Tatvan, and Ercis. Local residents who discuss the Lake Van Monster call it Canavan, which is a mix of the Turkish word for monster, "canavar," and the lake's name, Van. Reported since at least the 1960s, the Lake Van Monster is said to be black or brown, 30 to 60 feet long, and a rapid swimmer. The strange noise it makes scares many, but the animal has harmed no one. Turkish cryptozoologist Sarper Cubuk has collected more than 1,000 reports of sightings of the Lake Van Monster, which occur frequently. For instance, one day in September 1996, a large group of people came to the town of Celebibagi, Ercis, to observe the creature, which had swum too close to the shore and gotten stuck in the marsh. After an hour, it managed to free itself, and dove back into the depths of Lake Van. And in the 1990s, 26-year-old Unal Kozak, a Van University teaching assistant, captured the creature on video. Posted online by CNN in June 1997, the Lake Van Monster footage shows clear images of the creature swimming. Some cryptozoologists believe that the Lake Van Monster is actually a sturgeon, but this explanation is disputed in Turkey.

Asia also has various Giant Salmon sightings (Lake Hanas, China), Giant Catfish reports (many lakes), and even Mystery Sirenian accounts, such as the 30-foot, cow-headed animal seen in February 1977 in Danau Poso, Sulawesi, Indonesia.

OCEANIA

Australia is the home of the greatly misunderstood Bunyip. This legendary creature plays a role in the ancient oral folklore of the Aboriginal people, and its story continues on into modern times, though apparently not to the present day. What is a Bunyip? "Not

an easy question to answer," remarked Bernard Heuvelmans in *On the Track of Unknown Animals* in 1958.

Generally, the Bunyip has been described as a large, hairy semi-aquatic creature with the head of a horse. *The Oxford Companion to Australian Literature* defines the Bunyip rather nicely as "a monster of Aboriginal mythology with a huge body covered with fur" and "is said to live in swamps, lagoons and billabongs from which it emerges on moonlit nights to prey on humans, especially women and children."

The Bunyip's body is usually not described, because sightings occur within rivers or lakes. An interesting sighting occurred early in the twentieth century at Gooromon Ponds, only a few miles north of Canberra's suburbs. Witnesses claimed that a hairy horse-headed creature rose from the pond and wallowed much like a giant seal on the water. Particularly intriguing are reports from around Lake George and Lake Bathurst, both near the Australian Capital Territory; these two lakes are sacred places to the Aboriginal people, and Bunyip sightings were reported frequently in these lakes in bygone days.

Today, cryptozoologists in Australia feel that the Bunyip was nothing more than an out-of-place ocean-going seal that had ventured up rivers and other inlets from the sea. No recent Bunyip sightings are acknowledged, although country histories and local traditions carry on with the lore of the Bunyip. Australia seems otherwise devoid of Lake or River Monsters (see page 270).

One of the area's most-discussed river cryptids is New Zealand's Waitoreke. This three-foot-long otter or seal reportedly slides down riverbanks, whistles, and lays eggs. Captain Cook filed the first reports of this Maori-named creature in May 1773, at Dusky Bay on New Zealand's South Island. Reports followed from Ashburton River (1850s), Lake Hauroko (around 1880), Aparima River (1890–1921), a lagoon near the Aparima River (1971), Hollyford River

(1971), and Taieri Plain (1973). The Waitoreke has never been taken and identified.

From Papua New Guinea and Irian Jaya come reports of unknown stingrays, unknown sharks, and even a dinosaur, though the latter was probably a hoax.

Monster Latitudes

So many Lake Monsters have been reported around the world that it almost seems as if a list of lakes *without* Lake Monsters would be shorter than one *with* Lake Monsters (see appendix list, starting on page 305). But that is not quite so.

There is something quite striking about the location of such lakes. "There exists a plethora of reports concerning unknown animals of immense size inhabiting lakes right across the continental United States and Canada," notes researcher John Kirk, author of *In the Domain of Lake Monsters*. "Right across" is a key phrase. The same sort of alignment occurs across Europe, where, as folklorist Michel Meurger notes in *Lake Monster Traditions*, we discover that the "supposed habitations of these creatures are very widespread: the British Isles, Scandinavia, Siberian Russia, France, Italy, Czechoslovakia, and Southern Slavic countries."

For several decades now, researchers have talked about the "belts" of lakes where these creatures are seen. Beginning in the 1940s, zoologist Ivan T. Sanderson wrote about what would become known as the "Monster Latitudes," areas known to have concentrations of aquatic cryptid reports. But, in his 1967 book *Things*, Sanderson observes:

[D]on't think for a moment that freshwater Monsters are confined to our northern latitudes. There are numerous other "horrors" reported from our south central states and from Florida, and from all around the tropics. Then again, they also crop up in the cold temperate regions of the Southern Hemisphere. But here is a funny thing. When you come to plot the scores of lakes and rivers in which "Monsters" have been reported in the northern belt, which encircles the Arctic polar area, you will note that all of them fall within the vegetational belt known as that of the Boreal Forests, or in southward extensions of this which enter the U.S. due to high altitude—such as the Adirondacks, Montana, and Idaho.

Zoologist Bernard Heuvelmans also tackled the question of the geographic distribution of these so-called Lake Monsters. "Attention must be drawn to the fact that all these long-necked animals," he wrote in *Cryptozoology* in 1986, "have been reported from stretches of freshwater located around isothermal lines 10°C; that is, between 0°C and 20°C (i.e., 50°F, between 32°F and 67°F) in both the Northern and Southern hemispheres. One could hardly wish for better circumstantial evidence of their existence."

This band of latitude across Asia, Europe, and North America conforms to the coniferous boreal-forest zone and the transition zone between the boreal and the southern hardwoods forest. These are the Monster Latitudes of the Waterhorses and similar creatures.

It should come as no surprise, then, that the great explosion of modern Lake Monster reports would occur at Loch Ness only after 1933, when the trees around the loch were being trimmed and felled as an old road was expanded and improved. Lake Monsters need eyewitnesses to be reported, and with the boreal forest in the way, they were generally out of sight. Besides cutting down the forests,

increased mobility in the new age of the automobile and increased media awareness were important factors that led to the 1930s sighting reports. Since then, media interest has leapfrogged from lake to lake, and people began looking through the trees to their nearby and often ignored lakes.

Of course, not every lake, even in the Monster Latitudes, will be home to a cryptid. As a rule, man-made lakes don't hold much promise for monster hunting. They tend to be too shallow, too small, too warm, and/or too polluted. The exception would be the large, clean artificial lakes located near rivers; migration from one body of water to a man-made lake is within the realm of possibility. This certainly seems to be the case for reports of the Giant Beavers from western North America. And so, too, for reports of catfish growing into giants because they are finding safe havens in man-made lakes in the United States.

Small lakes and shallow ones are also less than likely settings for monsters. Real monsters need space to live, hide, feed, and mate, and it is difficult to do so in small and/or shallow lakes. The lakes with the longest traditions of cryptids are those with large volume, great depth, and limited human access.

A viable living environment is another important variable. Some lakes are too hot or too polluted to sustain a viable ecosystem. And the animals need food—a sizable amount of it. In 1999, PBS's *Nova* and the Loch Ness Project found that 27 tons of fish exist in Loch Ness (not counting eels), quite enough to support a few monsters.

Dead lakes, so-called usually because of their high salt content, are also unsuitable monster habitats, horror films notwithstanding. But dead lakes may have been quite alive at one time, as the Great Salt Lake of Utah illustrates. Visit the Salt Lake City and County Building, built in the 1890s, and you will find a Kyune sandstone exterior decorated with numerous intricate carvings. The mythical

Sea Serpents and Monsters carved in the building's exterior are those that were said to have ruled Lake Bonneville, the large prehistoric freshwater predecessor of the Great Salt Lake.

A viable lake must also have water year-round, as obviously dry lakes cannot sustain cryptids. This is why, in the vast continent of Australia, Lake Monsters are probably nonexistent. Our survey of Australian cryptozoologists—Paul Cropper, Malcolm Smith, Tim Bull, Peter Darben, Debbie Hynes, Col Bailey, and Dean Harrison—found them universally in agreement on this point: Australia's major "lakes" are either bone dry or they dry out intermittently and cannot be home to Lake Monsters. Paul Cropper said that "there are no lakes in Australia that contain reports of anything similar to the classic Ogopogo and Nessie Lake Monsters." Debbie Hynes noted humorously, "An Aussie Nessie would need to be a pretty tough customer."

That's not to say that Australia has no aquatic mystery animals, however, but they tend to pop up in coastal and riverine areas, especially estuaries. Historically, you have Bunyip reports far up the Murray River, but only until the dams were built across it in the 1920s and 1930s. Almost certainly, the Bunyip sightings were due to seals, which made their way inland along rivers. The southern fur seal is the most likely candidate.

The one person who believes a Long-necked Lake Monster exists Down Under is Rex Gilroy, a controversial figure in Australian monster-hunting circles. But the specific lake he cites is Lake Galilee, in Queensland, which is not a freshwater lake at all but a body of highly saline water due to runoff. Australia has a long tradition of Waterhorse reports in the nearby Coral Sea, and Gilroy may have stumbled across evidence of a Sea Monster using a salty lake for a refuge.

Dracontology

With such a mass of material available on the subject of Lake Monsters, it should come as no surprise that some people would try to herd the subject into a separate field of study and give it its own name. And indeed, Jacques Boisvert of Quebec decided to name this field "dracontology." How this name came about, and the reception it has received, is an interesting story in itself.

Living not far from Lake Champlain, Boisvert became an avid investigator of the local cryptid at Lake Memphrémagog, another elongated body of water that the U.S.–Canada border bisects. While doing research early in the 1980s, Boisvert got in touch with a monk friend at the Benedictine Abbey of St-Benoît-du-Lac on the shores of Lake Memphrémagog. Boisvert asked his friend to find a word that would identify the science dealing with strange, unidentified lake-dwelling creatures. The monk, a linguist, found the word *dracontologie,* and Boisvert began using the word at every opportunity.

Boisvert strictly defined dracontology as "the study of lake animals unknown to science." On December 3, 1984, the word was officially accepted by *l'Office de la langue française du Québec,* the governmental body for bilingual affairs. In 1985, the *American Heritage Dictionary* officially recognized the English variation of the word, *dracontology.* Then, a year later, Jacques Boisvert founded *la Société de dracontologie internationale du lac Memphrémagog* (the International Dracontology Society of Lake Memphrémagog). He contacted zoologist Bernard Heuvelmans, who, according to Boisvert, accepted the word as denoting a branch of the broader discipline of cryptozoology, the study of "hidden animals."

The use of the word was well on its way to wider acceptance, particularly in Quebec and among authoritative lexicon bodies. But

among the greater population, the word has not been as generally accepted as *cryptozoology*, and ripples of discord began to appear in the mid-1990s. In 1995, after cryptozoologist Karl Shuker wrote a book entitled *Dragons: A Natural History*, reviews and press releases described the book by stating, "an expert in dracontology presents well-illustrated and complete information on dragons." Dracontology, dragons? What's going on here?

It's true that some "dragon" reports seem to have much in common with modern Lake Monster reports. But some linguists would have none of it. In 1996, *Oxford English Dictionary* consultant Michael Quinion, writing for *Wide World Words*, had nothing nice to say about this new definition of *dracontology*. "Strictly speaking," he wrote, "dracontology should refer to the study of dragons. It derives from Greek *drakon*, serpent (plus *-ology* from a Greek ending that indicated the study of a subject). It's a kissing cousin to the almost equally rare adjectives *draconiform* and *dracontine*, both of which refer to a thing like a dragon."

Quinion's comments make sense—and he wasn't finished. "Those enthusiasts who have an interest in this specialist branch of cryptozoology—the study of animals unknown to science," he wrote, "have hijacked the word for the investigation of such fabulous beasts as the Loch Ness Monster in Scotland and the serpent of Lake Memphrémagog on the Quebec-Vermont border. . . . That small group of researchers who use dracontology for the study of dragons would wish that the good brother had found a less confusing term. How about cryptolacustribestiology? No? I can't blame you—it's almost as long as Nessie herself."

In short, history has not been kind to *dracontology*.

As we begin the twenty-first century, cryptozoologists appear confused and have drifted away from the proposed original cryptozoological meaning of the word. In his 2001 book, *Sea Serpents and Lake Monsters of the British Isles*, journalist Paul Harrison defines

dracontology as the "study of Sea Serpents and Lake Monsters." Then in December 2001, editor Craig Heinselman published a special issue of *Crypto*, entitled "Dracontology: Being an Examination of Unknown Aquatic Animals," with contributions on both Sea Serpents and Lake Monsters.

Dracontology, a perfectly fine word, seems rather at sea today, when in fact it was supposed to set sail only in the freshwater lakes of the world. To us, it has always had a too nearly mythical feel about it, and we tend to agree with English critic Michael Quinion. *Dracontology* belongs to the dragons.

The Ridicule Factor

Lake Monsters are still being reported, though you're not likely to find stories about them on the front page of *The New York Times*. You have to know where to look. Likewise, stories about Sea Serpents still appear in the local newspapers near where the creatures are observed. And some Internet sites, like *The Anomalist*, trawl the net daily and post links to these local stories.

Nonetheless, there is no arguing the fact that the number of Sea Serpent reports has dropped considerably in the last century, especially in comparison to Lake Monster reports. Why? There are probably several reasons.

If people are seeing Sea Serpents but not reporting them, the "ridicule factor" is likely to blame. A witness's reluctance to report a sighting, fearing fallout to one's reputation or livelihood, has always been a problem, of course, but the power of ridicule may be even more pronounced these days with science having a greater say than ever before about what's real in our world and what's not.

If people who see Sea Serpents are reporting them, those in the best position to receive such reports are not likely to make hay of them. June O'Neill, the author of the superb book, *The Great New England Sea Serpent*, published in 1999, believes the Coast Guard probably receives Sea Serpent reports from private individuals. "But honestly," she says, "do you think they're going to publicize or forward reports for publication? It's doubtful."

Sea Serpent reports are certainly not likely to get logged by the Coast Guard, even if "official" observers are spotting the creatures. Says O'Neill:

> *A good friend of mine who is a Lieutenant in the U.S. Coast Guard saw, in the company of several other officers, an unknown creature in the mid-Atlantic while on a U.S. Coast Guard ship in the mid-1990s. From the bridge it appeared to be brownish in color and about 50 feet long. It circled their ship for about 15 to 20 minutes at a relatively rapid pace. At no time did it "blow," nor did it have any observable dorsal or caudal fin, ruling out sharks or whales. They did not see a head or neck. All on the bridge asked what it was and none had ever seen anything like it, but they did not call it a "Sea Serpent" or "Sea Monster." It was not officially logged.*

Then there is the issue of terminology. If people are seeing Sea Serpents, there's a good chance that they are not calling them Sea Serpents anymore, for fear of ridicule. They might refer to it as "that weird thing Keith saw," or that "odd thing." O'Neill thinks this sort of indirect reference to Sea Serpents is happening more and more frequently.

The current dearth of Sea Serpent sightings might also be explained by a lack of observational opportunities. To begin with, the number of boats out in the water these days is fewer than in the past,

and those that do ply the waters tend to be noisy—which is likely to keep marine life of all kinds away.

There is no better illustration of the value of a slow, silent vessel for witnessing the mysteries of the ocean than what Thor Heyerdahl and his crew experienced during their three months aboard a 45-foot raft named *Kon-Tiki*. During the 4,300-mile journey, which set out from Peru on April 28, 1947, Heyerdahl observed not only numerous rare sea creatures but several unidentified animals as well. The ship's log described one as a "thick dark-colored fish with a broad white body, thin tail, and spikes" and another as a six-foot-long creature that wiggled its body like an eel and had a "thin snout, large dorsal fin near [the] head and a smaller one in the middle of the back, heavy sickle shaped tailfin." On several occasions, the raft passed "a huge dark mass, the size of the floor of a room," which Heyerdahl thought was a giant manta ray. And on another night, three huge phosphorescent forms circled their raft for hours without surfacing. The crew assumed that these somewhat oval shapes were the backs of the animals, the visible portions of which measured about 30 feet long.

Adding to the observational problem is the fact that modern fast-moving ships tend to follow well-traveled aquatic highways, called "sea-lanes." Sea Serpents may be deliberately avoiding this shipping traffic.

If not, then perhaps the current dearth of Sea Serpent reports is due to a high mortality rate of Sea Serpents due to collisions with ships. A recent study shows that between 20 to 35 percent of whales found dead show signs of massive bruising, probably from having been struck by ships. "You can't bruise a carcass," notes James Mead, a whale specialist at the Smithsonian Institution's National Museum of Natural History. The most likely cause of bruising, he said, was a collision with a ship. Some whales had rows of slash marks left by propellers; others suffered massive internal injuries in

collisions. A more remote possibility, if the scenes on ancient woodcuts are at all accurate, is that some of these injuries may be battle scars from scrapes with Sea Serpents.

Further reducing the opportunities for observation is the fact that fishing methods have changed dramatically in the past half-century. There is, for instance, very little hand lining over the side of the boat anymore. Fewer potential observers means fewer reports of Sea Serpents.

But there may be even more fundamental reasons for the reduction in Sea Serpent reports of late. Perhaps the creatures have been largely driven to extinction—or at least to a population so small that sightings are rare. The 1960s, as O'Neill points out, speaking specifically of Sea Serpent reports coming from the Bay of Maine, was actually the beginning of the death of the Grand Banks fishing. The incredibly fecund "sacred cod" were reduced to commercial extinction. Perhaps the Sea Serpents that fed off the cod have left, swimming in more gastronomically enjoyable oceans elsewhere.

On the other hand, there is no good explanation for the extraordinary drop-off in the Atlantic salmon population of late, as O'Neill points out. And these are a known species, important commercially, and very well studied. In this light, our lack of knowledge about the apparent reduction in Sea Serpent sightings is an equal—but not necessarily greater—mystery.

Carcasses and Globsters

If Sea Serpents exist, why don't we have a body? Well, we do. Dozens and dozens of odd carcasses, strange live catches, and huge lumps of decaying tissue—widely known as "Globsters"—have

been recovered across the globe in the past couple of centuries. But what *are* they, exactly? Identifying often partial and decomposing remains is no easy task. It's a little like having a 500-piece puzzle with hundreds of pieces missing. To make matters worse, rarely is the discoverer of the remains qualified to determine the creature's possible identity. And seldom is a sample of the specimen removed for later examination. Forget about retrieving the entire remains, which in some cases may weigh several tons.

That leaves the attempt to determine the identity of these remains, trying to sort the possibly extraordinary from the almost certainly mundane, to investigators years after the event, often from little more than a brief newspaper account. At that point, the bias of the person doing the armchair reconstruction plays a large role in the outcome. These found remains are like ink blots. You see what you want to see.

The pro–Sea Serpent Bernard Heuvelmans discusses 20 such cases in his *In the Wake of the Sea-Serpents*, and lists 14 more. The skeptical marine biologist Ben S. Roesch comments on these cases and dozens more in his exhaustive multi-part series "A Review of Alleged Sea Serpent Carcasses Worldwide," which appeared in his journal, *The Cryptozoology Review*. Another notable source for these reports is Mark Chorvinsky's "Globsters" homepage at *Strange Magazine* on the Internet.

There is no clear beginning to reports of beached Sea Serpents, but one dates back far enough, to 1648, to make the point. A 40-foot something was thrown up on the sands of Oaxaca, on the Pacific coast of Mexico in this year, but the details come from a none-too-credible source and are suggestive of a whale more than anything else, were it not for its "red skin." Phrases like "if not for" come up repeatedly in the history of attempts to identify possible "Sea Serpents." Even if the unknown is a known animal, that doesn't mean it's not extraordinary.

Take the famous case of the Stronsay Beast, for example. A 55-foot, eel-like creature with a 15-foot neck, small head, and long mane—running down its back to its tail—was found cast up on the rocks on one of the Orkney Islands off northern Scotland on September 26, 1808. It's generally agreed that it was a basking shark, but if so, it would be much longer than the longest basking shark ever found (about 40 feet).

The basking shark is the *numero uno* culprit in many reports of found "Sea Serpents." How does a dead basking shark masquerade as a Sea Serpent? Quite easily, in fact. British zoologist Karl Shuker explained in *Strange Magazine*:

> *When basking shark carcasses begin to decompose, the entire gill apparatus falls away, taking with it the shark's characteristic jaws, and leaving behind only its small cranium and its exposed backbone, which have the appearance of a small head and long neck. The triangular dorsal fin also rots away, sometimes leaving behind the rays, which can look a little like a mane—especially when the fish's skin also decays, allowing the underlying muscle fibers and connective tissue to break up into hairlike growth. Additionally, the end of the backbone only runs into the top fluke of the tail, which means that during decomposition the lower tail fluke falls off, leaving behind what looks like a long slender tail.*

The century of the Stronsay Beast saw four more Sea Serpent cases with similar explanations. The 30-foot Sea Monster caught in Raritan Bay, New Jersey, in 1822 is widely believed to have been a basking shark. Not so clear-cut is what Captain Hanna caught in his net while off New Harbor, Maine, in August of 1880. The dead 25-foot-long fish had a flat head with sharp teeth, two small pectoral

fins behind the head, and an elongate shape like an eel. Heuvelmans, Shuker, and others believe that Hanna's fish might be some unknown species of serpentine shark, but Roesch feels that a more likely candidate is a new species of bony fish.

The other two "shark" explanations from this century are more straightforward. While lying at anchor in New River Inlet, on Florida's eastern seaboard, in the spring of 1885, the Reverend Gordon of Milwaukee found a carcass attached to his anchor. It was 42 feet in length and 6 feet wide, had a slender neck and two flippers, but was missing its head. Heuvelmans thought it was probably a rotting shark; Roesch tagged it a basking shark. And in August of 1896, the *Crescent City* fishing steamer reportedly towed, then killed, a 49-foot-long, eel-shaped creature with a shark-like head at Carabelle, Florida. Roesch believes that it was either a whale shark or a basking shark.

The twentieth century saw several more shark–as–Sea Serpent explanations. George Petit of the Paris Museum pronounced the 25-foot carcass found on the beach in Querqueville, France, on February 28, 1934, a basking shark. Zoologist Shuker believes that the carcass found stranded on the shores of Gourock on the River Clyde in Scotland in the summer of 1942 was probably a giant carnivorous shark. It measured a foot or so shy of 30 feet long, had a long neck, a small, flattened head with sharp muzzle, pointed teeth, a long rectangular tail, and two pairs of L-shaped flippers.

Other basking shark identifications for "Sea Serpents" include the 40-foot creature found onshore near Effingham on Vancouver Island, Canada, in 1947; the 33-foot decomposing carcasses caught in the nets of a Japanese fishing vessel off the waters of New Zealand in April of 1977; and the skeleton that washed up on the beach at Villa Rico, in Claveria, Philippines, on Christmas Day 1996. It measured 26 feet long and was eel-like with a turtle-like head and

fins. A Canadian missionary claimed that it was the remains of a plesiosaur, but Roesch is convinced that it was yet another basking shark.

Decomposing whales of various kinds are responsible for as many, if not more, found–Sea Serpent reports as sharks are. The captain of the *Chalcedony,* sailing off Monhegan Island, Maine, on June 5, 1880, spotted something floating in the water, which he took to be a dead Sea Serpent. But the 20-foot-long body was probably a dead whale, floating upside down in the water, with its flukes rotted off. The snout of the 40-foot carcass that washed ashore off Queensland, Australia, in March of 1883 was estimated to be about 8 feet long. Both Heuvelmans and Roesch point to a whale as the culprit.

On August 2, 1863, the commander of the schooner *Beaver,* anchored near Hamai, at Sungyce, China, heard a commotion among villagers about a great fish that was being killed by thousands of men. It turned out to be 81 feet long with the head of a snake, but an eye like a hog's. The villagers cut off the head for the commander, who had asked to see inside the creature's mouth, which had three rows of soft teeth all of the same size. Heuvelmans thought it might have been a huge unknown selachian shark or a giant eel. Roesch and marine expert Richard Ellis concluded that it was probably a baleen whale.

In early November of 1891, the *The Times* of London reported that the Bishop of Adelaide, while riding along the beach at Avoid Point, near Coffin Bay, South Australia, had come across what looked like "an immense snake" 60 feet long, with two blowholes on the top of its five-foot-long head. The Bishop later claimed that there was no truth to the story, and the case is known as the Coffin Bay Hoax. But just in case it was real, Roesch is quick to explain it as a mysticete whale—the only whale with two blowholes.

The crew of the English trading steamer *Emu* reported that a

massive brown creature, covered with hair and weighing about 60 tons, had washed up on Suwarrow Island, in the South Pacific, in 1899. This sounds like a whale, a beaked whale—if not for its reported length of 60 feet! Roesch believes it was the remains of a "very rotten beaked whale," though he admits the length of the carcass had to have been greatly exaggerated. Either that or it was a genuine Sea Serpent.

A number of other whale-related cases occurred in the early 1900s. In 1906, the captain of the *Tropper* saw, near Dungeness, Kent, England, a 50-foot-long carcass with white stripes, which he took to be a Sea Serpent. In 1908, trawlers of the steamship *Balmedic* dredged up the skull of an unknown monster from the Atlantic north of Scotland. A "huge sea Monster" washed up on Soldiers' Key, a few miles south of Miami, Florida, in January of 1921. Three months later, a "Sea Serpent" washed ashore at Jehu Sands, near Bombay, India. Still alive and emitting cries when found, the monster was 25 feet long with black skin and a mouth lined with large teeth. And in November of 1921, a 15-ton beast washed ashore at Cape May, New Jersey. What were these animals? Whales of one kind or another, apparently—humpback, right, pilot, or baleen.

If not a plesiosaur, then at least a rare whale. That's what California newspapers were reporting in 1925 after publishing photographs of a mystery creature variously described as 35 to 50 feet long, with a narrow, 20-foot-long neck, a huge head, beak-like snout, and tiny eyes. After examining the carcass on the beach northwest of Santa Cruz, the naturalist E. L. Wallace concluded that it was a plesiosaur that had been preserved in glacial ice, which had thawed out and been deposited to the south. But on the basis of the skull, the California Academy of Sciences Museum thought that it was a rare type of beaked whale.

Whales are also the favored explanation for many "Globsters." The term was first applied by zoologist Ivan T. Sanderson to de-

scribe the strange carcass that washed ashore in Tasmania in August of 1960. Examined by scientists two years later, the remains measured 20 feet long, 18 feet wide, and almost 5 feet thick. It is estimated to have weighed anywhere between 5 and 10 tons. The animal had a hump of about 4 feet in front that tapered gradually to about 6 inches at the back. When the scientists stated that they had no idea what the carcass might be, a second expedition was sent out to examine the Globster. They concluded that it was "not inconsistent with blubber"—that the glob, in other words, probably came from a whale. Another Globster, found at Muriwait Beach on the east side of New Zealand's North Island in March of 1965, was also determined to be the blubber of a whale.

Can we trust all these whale–as–Sea Serpent explanations? Quite frankly, probably not. But in most cases, there is no doubt. Take the case of a creature with a serpent-like body found on the beach in Tecoluta, Mexico, in March of 1969. Its body was covered with hard jointed armor, and a ten-foot bone tusk protruded from its head. What could be stranger? But a seven-man commission of scientists determined that the creature was a finback whale. The "bone tusk" of the Tecoluta carcass was probably a piece of the jawbone of the whale's skull. Their decomposed skulls often remind people of elephant tusks.

Like the basking shark and the whale, the oarfish is also responsible for many a found "Sea Serpent." In about 1848, a fishing vessel in the Firth of Forth, off Scotland, caught a serpentine fish longer than their boat, half a foot thick, with a dorsal fin about seven inches high. The consensus? An oarfish. The following year, on March 26th, a strange animal called a "Sea Serpent" by the *Illustrated London News* was caught off Cullerboast in Northumberland, England. Two naturalists later identified the 12-foot-long animal as an oarfish. On January 22, 1860, two men walking the beach at Hungary Bay, off Hamilton Island, Bermuda, came upon a "huge sea-monster"

dying on the rocks. It was some 16 feet long, tapering from head to tail like a snake, with a head like a bulldog without teeth. The naturalist J. Mathew Jones pronounced the creature an oarfish. On September 22, 1880, the Indians of British Columbia caught a creature six feet in length with a mane and a head shaped like a panther's in the deep waters of the Straits of Deharo, near Victoria, Canada. Though some researchers might be tempted to regard this as a juvenile Sea Serpent, the skeptical Roesch prefers to note its resemblance to the oarfish. Ditto for the 20-foot creature that washed ashore at Newport Beach, California, in February of 1901, the remains of which were found in Sumbawa, Indonesia, in 1906, and the 30-foot-long eel-like creature that washed up on the Copeland Islands, off Ireland's northeastern coast on September 5, 1908. Oarfish, one and all.

Even worms and rays have been mistaken for Sea Serpents. In 1849, local fishermen brought to the museum in Usan, Scotland, what they thought was a baby Sea Serpent. It was more than 20 feet long, brown in color, and less than an inch in circumference. And it was still alive. The creature was subsequently identified as a nemertean worm, which can reach lengths of about 30 feet. And on August 8, 1977, a strange-looking carcass was found floating "face down" in the water near Al Fantas on the coast of Kuwait. The carcass, which broke apart as it was pulled ashore, was about five feet long, had a big mouth, two nostrils, two eyes, and two ears jutting out of the skull. Roesch identified it as a cow-nose ray.

Some cases of found Sea Serpents are so puzzling that critics find themselves resorting to the old standby of "a hoax" to explain them. One such case is that of the Margate Monster. On November 1, 1922, Hugh Balance watched what looked like "two whales fighting with some sea monster" off the beach at Margate, Natal, South Africa. Crowds watched as the battle continued for hours. Eventually the whales left the floating mass behind, and the next day it

washed ashore. It was 47 feet long, 10 feet wide, and 5 feet high. On one end was a 10-foot-long tail, at the other was a trunk 5 feet long, 14 inches in diameter, and ending in a pig-like snout. As if that wasn't strange enough, the creature had an 8-inch white fur or hair covering like a polar bear's! "On the grounds of zoological implausibility alone," Roesch concluded that it must have been a newspaper hoax. Some things are even harder to believe than a Sea Serpent.

Perhaps the most fantastic of all caught–Sea Serpent stories is that of the Monongahela Monster. On January 13, 1852, the *Monongahela*, based in New Bedford, Massachusetts, was sailing in the central equatorial Pacific when the lookout spotted a commotion in the water caused by a huge serpentine creature. The ship's sailors went out on longboats to hunt it with harpoons. The beast struggled for the next 16 hours, until the lines went slack and its lifeless body rose to the surface. The sailors then set to work on the creature's brownish-yellow, 103-foot-long body as though it was a whale, keeping the blubber as well as the head as proof of the creature's reality. Though it had some distinctly snake-like characteristics—like recurved teeth, a lower jaw with separate bones, and two lungs—it also had a pair of whale-like blowholes, and four paw-like projections of hard flesh. A detailed account of the encounter was handed over to the captain of another ship that was returning to Bridgeport, Connecticut, but neither the carcass head nor the *Monongahela* were ever seen again. Both Heuvelmans and Roesch regard the story as a hoax, but others are not so sure.

Two recent Sea Monster carcasses, both of which appeared in the summer of 1996, show that mundane explanations still offer the best fit for most of these finds. On May 28th, native fishermen found in their nets the skeletal remains of a strange sea creature, 25 feet long with a reptilian skull and large, carnivorous teeth. Fishery taxonomist Mohamed Azmi Ambak later identified the remains as that of a well-decayed orca or killer whale. Then on June 20th, a fisherman

netted a 14-foot-long carcass in the waters surrounding Block Island, Rhode Island. Photographs show a pointed head attached to a long, sinuous spinal cord, which Roesch identifies as a basking shark. Curiously, the skeleton was stolen as scientists were transporting it to the University of Rhode Island for examination.

After all this morbid trawling for washed up Sea Monsters, it is worth noting that a few finds have stubbornly resisted mundane explanations. What, for instance, was that giant lizard-like creature found on Alaska's Glacier Island in November of 1930? A team of investigators found a half-ton creature with a long tail and tapering head. It measured 24 feet long and about three feet wide, with a 14-foot tail. The elephant-like head was about 59 inches long, and its snout measured 39 inches, with a 29-inch circumference. It remains a true mystery—unless it was a newspaper hoax.

Other remaining mysteries include the *con rit* that washed up in Vietnam in 1883 (see case, pages 157–158) and, perhaps the best-known Globster of them all, the one that washed up on the beach in St. Augustine, Florida, in 1896 (see case, pages 243–246). Another possible Globster that may be a Giant Octopus is the cadaver of a large unidentified animal found by fisherman and diver Teddy Tucker on the beach at Mangrove Bay, Bermuda, in May of 1988. The odorless blob was eight feet long, rubbery, and very hard. Tucker kept a sample in formalin and took photographs, which he circulated to several experts, including James Mead of the Smithsonian, who could not identify it. Two microscopic examinations of the sample revealed that it was collagen. But, notes cryptozoologist Michel Raynal, "No known fish or reptile has a skin thick enough to possess such a mass of collagen."

Ten years later, on the other side of the world, another Globster showed up at Four Miles Beach, north of Zeehan on the west coast of Tasmania, Australia, at the end of December of 1997. The hairy mass of tadpole-shaped rotten flesh, 20 feet long and 6 feet wide and

weighing about 4 tons, was initially identified by biologists as whale blubber. The photo is quite interesting, however, with the glob showing at least six decomposing "fins" or "arms" sticking out from the side, suggestive perhaps of a Giant Octopus.

While it might seem that a study of strandings of this kind is all a waste of time, let's not forget that some strandings of unknowns have been forgotten because they are now zoologically known. Though the recognition of the existence of giant squids was based entirely on strandings and finds of dead specimens, still no live giant squid has ever been seen.

The same is largely true of all the beaked whales, curiously enough. We know of several new species of Ziphiidae, totally or mostly, from stranded animals. Curvier's beaked whale *(Ziphius cavirostris)* was first discovered as a stranding in 1883. Shepherd's beaked whale *(Tasmacetus shepherdi)* is known only from a stranded specimen, the first found in 1933; it has not reliably been observed in the wild. H. A. Longman described Longman's beaked whale, said to be "one of cetology's greatest mysteries," as *Mesoplodon pacificus* on the basis of a single skull and jaw found on a beach in Queensland, Australia, in 1882. And Gervais's beaked whale *(Mesoplodon europeaus)* has never been positively identified alive at sea, though it strands on North American beaches more frequently than any other mesoplodont.

Will a stranded animal ever be positively identified as a Sea Serpent? The odds against it are great. An extraordinary confluence of factors is required—a body found in a not-too-remote location, the recovery of the specimen or samples thereof, and a thorough examination by interested scientists—before a real Sea Monster has a chance of being identified as such. Until then, blobs will be whales and carcasses basking sharks, and nothing more.

Best Bets

There are 14 types portrayed in our field guide, illustrated with 45 individual case examples. Some were last seen centuries ago and may no longer exist today.

But tales of Lake Monsters and Sea Serpents, which may seem rather unlikely, nevertheless continue into the twenty-first century. While a few "hot spots" exist, Nessies have not overrun the planet, despite what the media may have you believe. Encounters are rare, and the discovery of new animals is not an everyday occurrence. Chances of catching such a creature are, admittedly, rather slim. So the question naturally arises: Which of this field guide's marine and freshwater cryptids are most likely to be discovered in the next century?

We believe that the most likely candidates for discovery will issue from our Mystery Cetacean category of unknown whales, dolphins, and beaked whales, not the least because zoologists have been literally tripping over stranded and beached ziphiids lately.

Our next best bet is the Mystery Manta. The good sightings and surface behaviors of such animals as Beebe's Manta make this ripe for integration into the zoological framework.

Another highly promising candidate for discovery is the Mystery Monitor. The pet trade and explorations in areas known to have probable new monitors mean that the chances for new finds increase yearly. It's only a matter of time before another Komodo dragon–like creature will be caught.

Less likely than our first three candidates, but still a good bet is the Giant Octopus. Considering the size of these beasts, and the use of new technologies, which have led to the discovery of new forms

of squids, the Giant Octopus's days of obscurity would seem to be limited.

Another promising candidate is the Classic Sea Serpent. With its global distribution, it's only a matter of time before one collides with a pleasure craft or oil tanker, as they have done reportedly with ships in the past, but whether that will result in a type specimen for science is another question entirely. The opportunity also exists for an unsuspecting fishing party to land one or to come upon a recently dead carcass.

Of all the types under discussion, the Waterhorse is the most "hunted" of these creatures. But active searches for the Waterhorse in Loch Ness, Lake Champlain, and lakes in Norway, Sweden, and Siberia do not necessarily translate into an imminent catch. These are intelligent, elusive animals capable of great swimming speeds and the ability to move on land when necessary.

Expeditions in Africa in search of dinosaurs will continue to garner publicity, and we think that the twenty-first century will see much more news of Dinosauria. While catching a real dinosaur is unlikely, we look forward to learning what the animals behind these reports really are. Well-organized expeditions planned for 2003 through 2005—by William Gibbons's team, Adam Davies's group, and Scott Norman/John Kirk's CryptoSafari in Cameroon—may give us some answers soon.

While the Great Sea Centipede, Giant Shark, Giant Beaver, Mystery Saurian, and marine Cryptid Chelonian are all, admittedly, long shots, our dark-horse candidate will come as a surprise to some. Renewed cooperation in the Arctic Circle between Russian, European, Canadian, and U.S. explorers and ship personnel could see new information developing on the long-forgotten Mystery Sirenian, Steller's Sea Cow. If the animals are not extinct, a non–Cold War world seems the perfect place to rediscover this once great beast.

Top Eight Places to Look for a Sea Serpent

Trying to find a good place to view a Sea Serpent is not an easy task. Unlike lakes and rivers inhabited by unknown monsters, oceans and seas are vast, and the places where cryptids may hide seemingly infinite. But here are a few random suggestions:

1. From a sailing vessel that does not plow the regular sea-lanes, anyplace in the world. Uncharted waters live only in legend, but charted seas that are less than routinely traveled may hold more promise for the Sea Serpent hunter than busy sea-lanes. Sailing, versus using a motored vessel, allows you to approach an unknown cryptid without frightening it. If you stay away from commercial sea-lanes, which are literally regular water highways for cruise ships, oil tankers, and other ocean-going traffic, you are more likely to find an area frequented by Sea Serpents.

2. Cadboro Bay, Vancouver Island. This could be the best land-based vantage point from which to spot a Sea Serpent. Judging from the number of contemporary sightings, Caddy is quite alive and well. The inland waters around Vancouver Island and northern Olympic Peninsula, especially Cadboro Bay, are known hot spots. Local merchants have Caddy books and souvenirs.

3. Off Soay, the Shetland and Orkneys, Scotland, as well as Scattery Island, County Clare, Ireland. Frequent sightings of

the local Sea Serpents around the North Sea make this a hot spot. The Scattery Island Interpretative Centre has information on the Irish Sea Serpent named Cathach.

4. Norwegian fjords. The Havhest, the Norwegian Sea Horse, and the Sula Sea Serpent appear to be making a comeback, with noteworthy sightings occurring in 1999 and 2001. Reports are concentrating on Storfjorden (the big fjord), southwest of Ålesund, and continuing to the east. These long and deep fjords form a maze leaving much of the outer landscape an archipelago—and an excellent viewing locale. Sulafjorden (the Sula fjord) is the outer part of Storfjorden, which continues south as Sykkylvfjorden and ends as Geirangerfjorden.

5. Chesapeake Bay, Virginia-Maryland. The high population base in the area increases the chances for future sightings of Chessie. But the number of sightings has diminished so much of late that one local magazine wondered: "Is Chessie Dead?"

6. The California Coastline. From the channel near San Clemente Island to the waters of Monterey Bay, from the harbors near San Francisco to the cliffs overlooking Stinson Beach, the ocean just west of California may be a playground and migration route for Sea Serpents, as it is for a variety of cetaceans. The Santa Catalina waterway has frequently experienced waves of Sea Serpent encounters and sightings, and doubtless will have more in the future. The Tuna Club of Catalina Island has organized fishing parties that have experienced sightings. The reports of Bobo, the Old Man of Monterey, an apparent Classic Sea Serpent, and other sightings have fostered a minor tourist industry of booklets on Sea Ser-

pents and led, at one time, to displays of Sea Serpent history at kiosks along walks around Santa Cruz.

7. Salem, Gloucester Harbor, and Singing Beach, Massachusetts. It is doubtful that the New England Sea Serpent still haunts the shores near Cape Ann, but you won't know if you don't look. Salem has an annual Sea Serpent Festival in October. The Gloucester Historical Society retains drawings, records, and related material from the many sightings and investigations of the 1800s, and often exhibits this material.

8. Along Bay, South China Sea. If the Giant Sea Centipede is going to make a comeback, the reports will begin here.

Top Twelve Places in the World to Look for a Lake Monster

Here is our list of the 12 best locations on the globe to try to see a Lake Monster. We make no promises, but in most of these places you will at least be treated to a visitor-friendly, monster-conscious atmosphere.

1. Loch Ness, Scotland. The lochside town of Drumnadrochit may be the "Epicenter of Cryptozoology." Here you will find Loch Ness cruises, walks, cycle trails, and the Urquhart Castle Visitor Centre as attractions. Urquhart Castle overlooks Urquhart Bay, which is the site of many Nessie appearances.

Nearby Temple Pier is the mooring location for Nessie-watching tours and scientific expedition craft. One tour boat operator's advice for spotting the Waterhorses: Wait until dawn or dusk, then scrutinize the loch from the area along the shore, where nutrients are plentiful and fish (and those who feed on the fish) feast. On the other hand, Yasushi Kojo, a Japanese researcher from Waseda University, found that Nessie is most often reported mid-morning, between 10 and 11 A.M., or mid-afternoon, between 3 and 4 P.M. There are two indoor exhibitions/museums at Drumnadrochit oriented to Loch Ness Monster hunters, tourists, and the scientifically inclined. One is The Original Loch Ness Monster Visitor Centre, which is pro-Nessie, and the other, about a half-block away, is the Loch Ness 2000 Exhibition, which provides a better understanding of the biology of the loch and tends to favor the monster's being a legend rather than real. Both sites have good exhibits, Nessie books and tapes, models of the monster, and rooms of souvenirs. A good vantage point from the south side of the loch is Foyers; it was from here that Tim Dinsdale in 1960 shot his famous film of Nessie. Of course, the scenic, meandering road around the loch provides numerous excellent monster-watching locations. And the Highland summer, with its near-midnight sunlight, makes for long viewing hours.

2. Lake Okanagan, British Columbia, Canada. This is the domicile of Ogopogo, and according to researcher Arlene Gaal, sightings seem to occur most frequently "around Okanagan Lake Bridge, between 10 A.M. and 1:30 P.M., in the Peachland area between 2 and 3:30 P.M., and near Okanagan Lake Resort from 2 to 5 P.M.; on very warm days and with mirror-flat lake conditions." But you won't need to see Ogopogo to know that

this is monster country. An annual regatta celebrates Ogopogo. Souvenirs, statues, and local books are available here for the true monster aficionado. A famous road sign near the lake, which recounts the ancient Native legend of these creatures, is a popular spot for photographs.

3. Lake Champlain, which straddles New York, Vermont, and Quebec, Canada, is the huge lake home of Champ. The most common locations for sightings are Bulwagga Bay, Crown Point, Button Bay, Kent's Bay, and Basin Harbor. According to researcher Dennis Jay Hall, you are more likely to see Champ in the five days before and after the new moon, so plan your trip accordingly. While winter sightings do happen, as a rule of thumb, most observations of Champ take place once the water temperature reaches 50°F. A time-of-day analysis by Japanese researcher Yasushi Kojo found that most Champ sightings are reported to occur after 4 P.M., with most taking place between 7 and 8 P.M., just before sunset. A Champ Sightings Board at the southern entrance to Port Henry on New York State Route 9N lists the names of people who have seen the Lake Monster. A full-sized replica of Champ is situated in the middle of the village and is featured on Champ Day—an annual festival to honor this local celebrity (held usually in late July).

4. Lake Seljordsvatnet, in County Telemarken, Norway, is inhabited by Selma, a lake cryptid chased annually by monster hunters from around the world. Seljord, population 3,000, is the largest town on the lake, but Rjukan, site of a secret Nazi heavy-water factory destroyed in World War II is better known because it was featured in the movie *Heroes of Telemark*. The small cruise vessel *M/B Fjøllguten* conducts Lake

Monster boat trips on Seljord Lake. The tours travel through quiet bays, and visit Selma's cave. Active Selma-watching is encouraged all around the lake, and visitors are invited to stop in to see the mistitled "Sea Serpent" exhibition at Seljord. But despite the recent attention to Selma, for Norwegians, nearby Lake Mjøsa is an even more famous Monster site, with searches for Mjossie there dating back to 1522.

5. Storsjön Lake, Sweden, has entertained monster hunters since the early 1800s, with reports going back 350 years. A local museum houses the trap used during the nineteenth century to attempt Storsjoodjuret's capture, or as English-speakers call it, Storsie. The creature is a bona fide tourist attraction, and souvenirs, images, and more can be found on a visit to the Ostersund area. Frequent summer cruises on the lake are offered, all with an eye to spying the monster.

6. Hoan Kiem Lake, Hanoi, Vietnam. This lake in the center of the city, also called "Lake of the Restored Sword," is the residence of some rather frequently seen Cryptid Chelonians. The lake is not only a historical site but is also famous for its beauty, having been visited for centuries by everyone from the ancient Greek poet Ludemis to modern foreign dignitaries. Many visitors who look out over the water for the great golden guardian turtles are said to see them. Street hawkers sell their photographs, and Giant Turtle spotting is a local sport.

7. Lago Nahuel Huapí on the border of Argentina is a modern gathering place for South Americans and foreign tourists, not as much for its Lake Monster, to be perfectly honest, as for the great ski slopes that grace the nearby mountains. The south-

ern shore city of Bariloche is a thriving metropolis of a hundred thousand people; use the city as your monster-watching hopping-off location. Witnesses have spotted Nahuelito from many nearby beaches and local roads serviced by transit buses. Monster or no monster, Lago Nahuel Huapí is said to be one of the most beautiful lakes in the world.

8. Tahoe Lake, on the California-Nevada border, is the home of Tessie. The "Emerald Lake," as Tahoe Lake is often called due to its naturally green color, offers the Tahoe Tessie Museum at King's Beach. This is not only the official monster-hunting center but it is also a favorite sighting location as well. Key chains, T-shirts, and other souvenirs can be obtained from local vendors and at the museum. The legalized gambling tourist trade on the Nevada side would seem to produce a natural base of possible witnesses, but in reality, the roads and hiking paths away from the entertainment center, as well as those in California, are quiet and uncrowded—good spots for serious Tessie observers.

9. Lake Tele, in the Congo River basin of Africa, is the number-one place on the planet for possible dinosaur spotting, but don't expect your journey there to be a walk in the park. If government regulations or the locals don't stop you, then the bugs and thick swamp brush probably will. Getting to the moon might be easier, but you won't find any dinosaurs there. For decades, Lake Tele has been the cryptozoologist's favorite location for searching for Mokele-mbembe, but an unstable political situation at the turn of the twenty-first century led monster hunters in Africa to split their time between the swamps of Cameroon, looking for Mokele-mbembe relatives,

and South Africa, searching for a Lake Monster locally called Howie, which reportedly lives in a pool at the bottom of a waterfall at Howick, in KwaZulu-Natal.

10. Silver Lake at Perry, New York, is the site of an annual "Sea Serpent Festival." The first Lake Monster sighting took place there on July 13, 1855, but when the Walker Hotel burned down and a fake monster was found, many felt that the whole "Sea Serpent" flap was a hoax. (It has all become fodder for the local tourist business.) There is even a large old bellows, attributed to the hoax, on display in the Pioneer Museum at Perry, with an exhibition card that states only that it is "believed to have been used to inflate the Silver Lake sea serpent." However, according to a 1999 article in the most unlikely of places, the *Skeptical Inquirer*, the original sightings may be based on encounters with a real animal. The article points out that Indian traditions of a creature date back long before the supposed "first sighting" of 1855; there are even settler accounts going back to 1825. So the "Sea Serpent" of Silver Lake may yet swim about, even if, as the *Skeptical Inquirer* concludes, it is nothing more than the tail of an otter wagging the tale of the monster.

11. Ikeda-ko and Kussharo-ko, Japan. The country known the world over for its Godzilla movies has two Lake Monster lakes of note. Ikeda-ko in the Kagoshima prefecture features Issie, and Kussharo-ko in the Hokkaido prefecture has Kushi. Since the first photograph of Issie was taken from the Ikeda lakeshore in 1978, interest in these creatures has grown steadily over the years. Witnesses have noted that a whirlpool at the middle of the lake often foreshadows an appearance of Issie. A local tourist shop at Ikeda provides the latest sighting information.

12. Lac Pohénégamook and Lac Memphrémagog, Quebec, Canada. This province is the location of two Lake Monsters that attract a large loyal local and tourist following: Ponik in Lac Pohénégamook and Memphré in Lac Memphrémagog. Promoted since 1974, when the local residents adopted the monster as the community's mascot, Ponik has been seen in Lac Pohénégamook, Quebec (at the Maine border) and is described as black and dragon-like. A local carving serves as a frequent tourist photographic spot. Lac Memphrémagog is a long finger-like lake running south from Magog (near Sherbrooke), Quebec, across the Canadian/U.S. border to near Newport, Vermont. Nestled in between mountains, the lake is both deep and cold. Ponik was known to the Indians, and appeared in a 1926 novel (thus demonstrating that the Nessie effect had nothing to do with local interest here). Lake Monster awareness in Quebec is high. A human in a Memphré costume walks the streets of Magog during the summer months, greeting visitors. The real Memphré, meanwhile, is out in Lac Memphrémagog, should you be so lucky as to see it.

If You Should See One . . .

So what should you do if you see a Lake Monster or Sea Serpent? The answer seems obvious, right? Obtain some photographic proof and physical evidence. Should you be so lucky as to come across a dead one, you could do no better than to follow the guidelines spelled out by A. C. Oudemans in his 1892 book, *The Great Sea Serpent:*

If an individual is killed, take the following measurements:

1. *Length of the head from nose-tip to occiput.*
2. *Length of the neck from occiput to shoulders.*
3. *Length of the trunk from shoulders to tail-root.*
4. *Length of the tail from tail-root to end.*
5. *Distance from shoulders to fore-flappers.*
6. *Distance from shoulders to thickest part of the body.*
7. *Length of a fore-flapper.*
8. *Length of a hind-flapper.*
9. *Circumference of the head.*
10. *Circumference of the neck.*
11. *Circumference of the thickest part of the body.*
12. *Circumference of the tail-root.*

Give a description of the animal, especially an accurate one of the head, the fore-flappers, and the hind-flappers, and, if possible, make a sketch.

If but barely possible, preserve the whole skeleton, and the whole skin, but if this is utterly impracticable, keep the cleaned skull, the bones of one of the fore-flappers and those of one of the hind-flappers, four or five vertebrae of different parts of the backbone, neck and tail; and preserve the skin of the head, and a ribbon of about a foot breadth along the whole back of the neck, the trunk, and the tail.

Oudemans's approach may seem somewhat outdated, but his advice is well worth heeding, as this is what zoology requires to acknowledge that a new animal exists in our day. Of course, most people coming face-to-face with a Sea Serpent or Lake Monster will be surprised by their encounter and will likely not have either a gun or a camera on hand. The best you can do under such circumstances

is to note the location, remember the weather conditions, make a quick drawing of what you saw, seek other witnesses, and notify an interested researcher or involved marine scientist or zoologist.

Just don't expect anyone to believe you.

The reality is this: Lake Monsters and Sea Serpents refuse to be banished from the maps. But no one really knows when, or if, these creatures will ever be found and accepted by science.

Acknowledgments

This field guide is the result of decades of research—along rivers, in lakes, and on the oceans of the world, as well as in libraries everywhere—and we appreciate all those who have provided assistance in making this a reality.

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Loren Coleman
Maine
Patrick Huyghe
New York
May 5, 2003

A Note on Style

Why are animal names sometimes capitalized, sometimes lower case, and sometimes in italics? The style used in this book follows the "manual of style" adopted by the International Society of Cryptozoology and its scientific peer-reviewed journal, *Cryptozoology*. The journal's editor, Richard Greenwell, detailed the proper capitalization of cryptozoological names, before and after discovery, in a footnote in *Cryptozoology* Vol. 5 (1986), page 101. Greenwell followed the same "manual of style" used in systematic zoology.

Greenwell is very clear in his example:

Native name: *okapi;*
Western name for presumed, undiscovered animal: Okapi;
Common name after discovery and acceptance: okapi.

For our extended use, this translates into:

Native name: *nahuelito;*
Western name for presumed, undiscovered animal: Nahuelito;
Common name after discovery and acceptance: nahuelito.

and

Native name: *naitaka;*
Western name for presumed, undiscovered animal: Ogopogo;
Common name after discovery and acceptance: ogopogo.

Therefore, as Lake Monster, Sea Serpent, Nessie, and related forms all have not been technically "accepted" by systematic zoology as of this date, the capitalized form is employed in this book.

Appendix

Geographical List of Lake and River Monsters Worldwide

Surveys and lists of freshwater monster habitats have a long tradition in cryptozoology, beginning in 1892 with a look at Lake Monsters in Norway and North America by A. C. Oudemans in *The Great Sea Serpent,* and continuing on through the years with Tim Dinsdale, Peter Costello, Janet and Colin Bord, Betty Gardner, Arlene Gaal, John Kirk, and others. Loren Coleman's initial research on Lake Monsters began in the 1960s, continued with a 1975 survey article written with Jerome Clark, and culminated with his first comprehensive list, which appeared in *Mysterious America* in 1983. Many authors have since used Coleman's list, expanding and updating it through the years. By 2002, George Eberhart had put together the most comprehensive list to date for his new encyclopedia, *Mysterious Creatures: A Guide to Cryptozoology.* Eberhart has given us permission to use and modify his list of Lake Monster locations in order to produce the following list. Please refer to Eberhart's encyclopedia for further source details and additional information on cryptids not covered in this field guide but named in our list.

Before making use of our list, you should be aware of the following guidelines. The list contains all kinds of animals reported as huge and mysterious in bogs, creeks, lakes, streams, creeks, rivers, swamps, and other, mostly freshwater, bodies of water. In other words, these are not just the large Nessie-type Waterhorse animals. A few water locations may be incorrectly labeled as "lakes" even though they are brackish or saltwater, but they are included here because their creatures are now part of the Lake Monster literature.

Where a creature's name is noted as "Monster," the animal is more often than not known by the name of the freshwater river or lake plus the moniker "Monster," as in "The Loch Ness Monster." Where a specific nickname is known, we have specified this name, as in "Nessie."

Where a specific known animal or hoax has been linked to a reported monster, we have indicated that, adding a question mark if the verdict is still in doubt.

The listing is organized first by continent, beginning with North America and followed by South America, Africa, Europe, Asia, and Australia/Oceania. Within each continent, we list the countries where Lake Monsters have been reported. Our most complete listings appear under North America's Canada and the United States of America, and under the United Kingdom, where we have carried on most of our extensive research and on-site investigations for over four decades. Under these locations, we have further broken down our Lake Monster locations by provinces for Canada, states for the U.S., and countries for the U.K.

You will find nearly 1,000 alleged Lake Monster locations in this list.

North America

CANADA

Alberta

Battle River (Ogopogo)
Bow River (Ogopogo, large eel or catfish)
Christina Lake (Christina)
Clearwater River (Ogopogo)
Cold Lake (Kinosoo)
Cow Lake (Monster)
Frog Lake (Monster)
Glenmore Reservoir (Monster)
Heart Lake (Monster)
Lake McGregor (Monster)
Lake Minnewanka (Monster, large fish)
North Saskatchewan River (Pink Eye)
Saddle Lake (Monster)
South Saskatchewan River (Agopogo)

British Columbia

Bennett Lake (Monster)
Boiling Water Lake, southwest of Fort Fraser (Monster Fish)
Chadburn Lake (Monster)
Chilliwack Lake (Canadian Alligator)
Cowichan Lake (Tsinquaw)
Cultus Lake (Canadian Alligator, Slal'i'kum)
François Lake, near Fort Fraser (Water-grizzlies)
Fraser River (Canadian Alligator)
Harrison Lake and River (Chunucklas)
Kalamalka Lake (Monster)
Kamloops Lake (Ogopogo)
Kathlyn Lake (Ogopogo)
Kootenay Lake (Ogopogo)
Lower Arrow Lake (Ogopogo)
Martin's Lake (Ogopogo)
Mill Lake (Monster)

Moberly Lake (Ogopogo)
Nicola Lake (Monster)
Nitinat Lake (Canadian Alligator)
Okanagan Lake (Ogopogo)
Osoyoos Lake (Ogopogo)
Oyster River (Klato)
Pitt Lake (Pitt Lake Lizard)
Seton Lake (Large sturgeon)
Shuswap Lake (Shuswaggi)
Skaha Lake (Ogopogo)
Somenos Lake, near Duncan (Monster)
Spirit Lake, near Skidegate (Wasgo)
Sproat Lake (Monster)
Tagai Lake (Tag)
Thetis Lake (Thetis Lake Monster, Gillman)
Upper Arrow Lake (Monster)
Williams Lake (Ogopogo)

Manitoba

Cedar Lake (Monster)
Lake Dauphin (Monster)
Lake Manitoba (Manipogo)
Red River (Erratic crocodilian)
Lake St Martin (Monster)
West Hawk Lake (Manipogo)
Lake Winnipeg (Winnipogo)
Lake Winnipegosis (Winnipogo)

New Brunswick

Grand Lake (Nessie)
Killarney Lake (Coleman Frog)
Loch Lomond (Monster)
Lake Maquapit (Giant Snapping Turtle)
Oromocto Lake (Monster)
St. Croix River (Monster)
Skiff Lake (Monster)
Utopia Lake (Old Ned)

Newfoundland

Crescent Lake (Cressie)
Dildo Pond (Monster)
Gander Lake (Maggot)
Great Gull Lake (Monster)
Long Pond (Giant Eel)
Swanger's Cove (Maggot)

Nova Scotia

Lake Ainslie (Beathach mor Loch Ainaslaigh)
Cranberry Lake (Monster)

Nunavut

Dubawnt Lake (Angeoa)

Ontario

Agawa Bay, Lake Superior (Monster)
Bay of Quinte (Monster)
Berens Lake (Cryptid crocodilian)
Big Rideau Lake (Monster)
Charleston Lake (Dino Monster)
Chats Lake, Ottawa River (Monster)
Conway's Marsh (Monster)
Darky Lake (Monster)
Georgian Bay (Monster)
Lake Huron (Monster)
Lake of Bays (Monster)
Lake of the Woods (Monster)
Long Point Bay (Monster)
Mazinaw Lake (Probable sturgeon)
Muskrat Lake (Mussie, Hapyxelor)
Niagara River (Monster)
Nighthawk Lake (Monster)
Lake Nipigon (Monster)
Nith River (Slimy Casper)
Lake Ontario (Kingstie, Oshawa Oscar)
Red Horse Lake, near Lyndhurst (Monster)
Rideau Canal (Monster)

Lac Seul (Monster)
Lake Simcoe (Igopogo)
Lake Temiskaming (Mugwump)
Thunder Bay (Merbeing)

Prince Edward Island

O'Keef's Lake (Monster, hoax)

Québec

Lac Aylmer (Monster)
Baskatong Lake (Horse's Head)
Lac Bitobi (Horse's Head)
Black Lake (Monster)
Lac Blue Sea (Horse's Head)
Lac Bowker (Monster)
Lac Breeches (Monster)
Lac Brochu (Monster)
Lac Brompton (Monster)
Lac-des-Cèdres (Horse's Head)
Lac Creux (Horse's Head)
Lac Decaire (Lizzie)
Lac Désert (Horse's Head)
Deschênes Lake (Monster)
Etchemin River (Monster)
Gatineau River (Horse's Head)
Lac Maskinongé (Muskellunge?)
Lac Massawippi (Monster fish)
Lac Mégantic (Hoax?)
Lac Mékinac (Huge Northern pike or muskellunge?)
Lac Memphrémagog (Memphré)
Moffat Lake (Monster)
Lac Pocknock (Horse's Head)
Lac Pohénégamook (Ponik)
Lac Rémi (Large Northern pike?)
Richelieu River (Siren, seal?)
Lac St.-François (Sturgeon?)
Lac St.-Jean (Ashuaps)
St. Lawrence River (Onyare, Large eels?)

St.-Maurice River (Monster)
Lac Simon (White shark)
Lac Sinclair (Monster)
Lac-à-la-Tortue (Large muskellunge?)
Lac Trente-et-un-Milles (Horse's Head)
Les Trois Lacs (Large fish?)
Lake Williams (Monster)

Saskatchewan

Hayman Lake (Monster)
Last Mountain Lake, Rowan's Ravine, 50 miles northeast of Regina (Monster)
Peter Pond Lake (Puff)
Turtle Lake, 50 miles east of Lloydminster (Monster sturgeon?)

Yukon

Teslin Lake (Monster)

GREENLAND

Lake Natsilik (Monster)
Lake Umanak (Monster)

GUATEMALA

Lago de Atitlán (Monster)

MEXICO

Lago Catemaco, Veracruz state (Monster)
Lago La Alberca, Guanajuato state (Chan)

NICARAGUA

Lago de Nicaragua (Monster)

UNITED STATES OF AMERICA

Alaska

Big Lake, near Mt. Denali (Crocodilian Monster)
Buckland River (Tirichuk)
Lake Clark (Monster)
Crosswind Lake, near Glennallen (Monster)
Iliamna Lake (Illie)
Kaluluktok Lake, at the head of the Kobuk River (Monster)
Lake Minchumina (Monster)
Noatak River (Tirichuk)
Nonvianuk Lake (Illie)
Walker Lake (Monster)

Arizona

Saguaro Lake (Giant Catfish)

Arkansas

Bedias Creek (Monster)
Lake Conway (Giant Fish)
Greers Ferry Lake (Water Panther)
Illinois River (creek) (Monster)
Mud Lake (Monster, hoax?)
White River (White River Monster, Whitey)

California

Blue Lakes, east of Ukiah (Monster)
Clear Lake (Clear Lake Catfish)
Elizabeth Lake (Monster)
Lake Elsinore (Hamlet)
Fish Lake (Giant Salamander)
Folsom Lake (Erratic Crocodilian)
Homer Lake (Manitou)
Klamath River (Water Dog)
Lafayette Lake (Erratic Crocodilian)
Lost Lake, Fresno County (Giant Catfish)
Sacramento River (Giant Snake and Giant Salamander)
Stafford Lake (Sturgeon)

Lake Tahoe (Tessie)
Trinity River (Water Panther and Giant Salamander)

Colorado

Lake Como (Monster)
Lake Katherine, near Mt. Zirkel (Monster)
Twin Lakes (Monster)

Connecticut

Lake Basile (Monster)
Connecticut River (Monster)
Lake Pocotopaug (Monster)

Florida

Lake Clinch (Monster)
Lake Monroe (Monster)
St. John's River (Pinky)
St. Lucie River, North Fork (Monster)
Suwannee River (Old Three Toes, hoax?)

Georgia

Altamaha River (Altamaha-ha)
Chattahoochie River (Monster)
No Man's Friend Pond (Monster)
Savannah River (Monster)
Smith Lake (Monster)

Idaho

Lake Coeur d'Alene (Paddler?)
Payette Lake (Sharlie, Slimy Slim)
Lake Pend Orielle (Paddler)
Snake River (Monster)
Tautphaus Park Lake, Idaho Falls (Monster)

Illinois

Lake Decatur (Giant Catfish)
Lake DuQuoin (Monster)
Four Lakes Village Quarry, Lisle (Monster)
Lake Michigan (Monster)
Stump Pond, DuQuoin fairgrounds (Giant Catfish)

Indiana

Bass Lake (Monster)
Big Chapman Lake, near Warsaw (Monster)
Big Swan Pond, south of Vincennes (Monster)
Eagle Creek (Monster)
Fulks Lake (Beast of 'Busco)
Hollow Block Lake, near Portland (Monster)
Horseshoe Pond, south of Vincennes (Monster)
Lake Manitou, Rochester (Monster, hoax?)
Lake Maxinkuckee (Monster)
Wabash River (Water Panther)

Iowa

Okoboji Lake (Monster)
Spirit Lake (Monster)

Kansas

Byron Walker Wildlife Refuge (Kingman County Lake) (Monster)

Kentucky

Herrington Lake, 30 miles south of Louisville (Monster)
Reynolds Lake (Giant Snake)

Louisiana

Calcasieu River (Monster)

Maine

Boyden Lake (Wiwila'mecq)
Chain of Lakes (Monster)

Machias Lake (Monster)
Moosehead Lake (Monster)
Rangeley Lake (Giant Fish)
Sysladobsis Lake (Monster)

Maryland

Patuxent River (Dragon)
Zekiah Swamp, Charles County (Eelpoot)

Massachusetts

Silver Lake (Giant Frog)
Twin Lakes, Berkshire Hills (Giant Snake)

Michigan

Au Train Lake (Monster)
Carter Lake, near Hastings (Giant Snake)
Lake Charlevoix (Monster)
Leelanau Lake (Monster)
Lake Michigan (Monster, hoax?)
Narrow Lake (Monster)
Nichols Lake (Monster)
Paint River (Monster)
Lake St. Clair (Monster)
St. Mary's River (Monster, hoax?)
Straits of Mackinac (Monster)
Lake Superior (Monster, Giant Sturgeon?)
Swan Lake (Swimming Cow?)
Thunder Bay (Monster)
Trout Bay, Lake Superior (Monster)
Williams Lake (Monster)

Minnesota

Basswood Lake (Monster)
Big Pine Lake (Oscar, Giant Sturgeon?)
Big Sandy Lake (Monster)
Leech Lake (Monster)
Minnesota River, near Eden Prairie (Snake?)

Lake Minnetonka (Monster)
Serpent Lake (Misunderstood Native Tradition, No Monster)

Mississippi

Mississippi River (Monster)
Pascagoula River (Monster)

Missouri

Lake Creve Coeur (Monster Fish)
Kansas River (Monster)
Missouri River (Monster)
Lake of the Ozarks (Giant Catfish)

Montana

Flathead Lake (Flathead Lake Monster, Montana Nessie)
Missouri River (Monster Fish)
Waterton Lake (Oogle-Boogle)

Nebraska

Walgren [Alkali] Lake (Monster)

Nevada

Lake Mead (Giant Catfish)
Pegrand Lake (Monster)
Pyramid Lake (Monster)
Walker Lake (Cecil)
Lake Tahoe (Tessie)

New Hampshire

Moore Reservoir (Crocodilian Monster)

New Jersey

Columbia (Monster)
North Shrewsbury River (Monster)
Old Mill Pond, near Trenton (Monster)

New York

Baldwinsville Mill Pond (Monster, hoax?)
Black River (Monster)
Canandaigua Lake (Monster)
East Caroga Lake (Monster)
East River, off Greenpoint (Monster)
Lake George (Hippogriff)
Hudson River (Monster)
Lake of the Woods, Jefferson County (Monster)
McGuire's Pond, Forestport (Monster, hoax?)
Lake Onondaga (Mosqueto)
Lake Ontario (Monster)
Lake Placid (Monster, rumors only?)
Silver Lake (Silver Lake Serpent, hoax?, otter?)
Spirit Lake (Monster)
Wading River (Monster)

North Carolina

French Broad River (Dakwa)
Hiwassee River (Tlanusi)
Lake James (Monster)

North Dakota

Devil's Lake (Giant Snake)
Lake Sakakawea (Monster)

Ohio

Charles Mill Lake, near Mansfield (Monster)
Lake Erie (South Bay Bessie)
Olentangy River (Monster)
Slavens' Pond, Bainbridge (Monster)

Oklahoma

Lake Eufaula (Monster)

Oregon

Crater Lake (Water Devil)
Crescent Lake (Cessie)
Forked Mountain Lake (Amhuluk)
Upper Klamath Lake (Monster)
Wallowa Lake (Big Wally)

Pennsylvania

Wolf Pond (Giant Snake)

South Carolina

Goose Creek Lagoon (Giant Salamander)
Lake Murray (Messie)

South Dakota

Lake Campbell (Monster)
Missouri River (Mi-ni-wa-tu, Unktehi)

Tennessee

Forked Deer River (Monster)
Kentucky Lake (Alligator Snapping Turtle?)
Little Tennessee River (Dakwa)

Texas

Brazos River (Monster)
Lake o' the Pines (Giant Catfish)

Utah

Bear Lake (Isabella, Bear Lake Monster)
Great Salt Lake (Monster Crocodilian, former inhabitant?)
Lake Powell (Giant Beaver)
Logan Lake (Monster)
Mud Lake (Monster)
Panguitch Lake (Monster)
Sevier Lake (Monster)
Utah Lake (Giant Beaver)

Vermont

Lake Champlain (Champ)
Connecticut River (Monster)
Dead Creek (Monster, hoax?)
Lake Willoughby (Monster)
Winooski River (Monster)
Woodbury Lake (Monster)

Washington

Lake Chelan (Crocodilian Monster)
Columbia River (Monster)
Moses Lake (Monster)
Omak Lake (Monster)
Quinault Lake (Monster)
Rock Lake (Monster, misidentifications?)
Spirit Lake (Monster)
Lake Steilacoom (Whe-atchee)
Lake Washington (White Sturgeon)

West Virginia

Monongahela River (Ogua)
Ohio River, near Parkersburg (Monster)

Wisconsin

Browns Lake (Monster)
Chippewa Lake (Monster)
Delavan Lake (Monster)
Devil's Lake (Monster)
Elkhart Lake (Monster)
Fowler Lake (Monster)
Lake Geneva (Monster)
Lake Kegonsa (Monster)
Keshena Lake (Monster)
Koshkonong Lake (Monster, Giant Pickerel?)
Lac La Belle (Giant Fish?)
Lake Mendota (Bozho)
Lake Michigan (Monster)
Mississippi River (Monster)

Lake Monona (What-Is-It)
Oconomowoc Lake (Monster)
Okauchee Lake (Giant Fish)
Pewaukee Lake (Monster)
Red Cedar Lake (Monster)
Lake Ripley (Monster)
Rock Lake (Rocky)
Sturgeon Bay (Monster)
Lake Waubesa (Monster)
Lake Wingra (Giant Turtle)
Lake Winnebago (Monster)
Yellow River (Monster)

Wyoming

Alcova Reservoir (Monster)
Bull Lake (Monster)
Lake DeSmet (Monster)
Hutton Lake (Monster)
Lake Katherine (Monster)
Pathfinder Lake (Monster)

South America

ARGENTINA

Lago Aluminé, Neuquén province (Guirivilu)
Lago Blanco, Chubut province (Patagonian Plesiosaur)
Lago Colhué Huapí, Chubut province (Iemisch)
Lago Fagnano, Tierra del Fuego national territory (Monster)
Lago Gutiérrez, Río Negro province (Giant String Ray)
Laguna Iberá, Corrientes province (Monster)
Lago Lacar, Neuquén province (Cuero)
Lago Lolog, Neuquén province (Cuero)
Lago Nahuel Huapí, Neuquén province (Nahuelito, Cuero)
Lago Pellegrini, near Cinco Saltos, Río Negro province (Dinosaurian Monster)
Lago Pueyrredón, Santa Cruz province (Monster)
Lago San Martín, Santa Cruz province (Monster)

Río Senguer, Chubut province (Iemish)
Lago Viedma, Santa Cruz province (Monster)
Lago Vintner, Chubut province (Monster)

BOLIVIA

Río Beni (Bolivian Saurian)
Laguna Origuere (Monster)
Lago Titicaca (Lake Titicaca Seal)

BRAZIL

Rio Abuna, Acre state (Giant Anaconda)
Amazon River (Giant Anaconda)
Rio Mármore, Mato Grosso do Sul state (Monster)
Rio Paraguaçu, Bahia state (Brazilian Saurian)
Upper Rio Paraguay, Mato Grosso state (Monster)
Upper Rio Paraná, Goias state (Monster)
Rio Putumayo, Amazonas state (Monster)
Rio Trombetas, Pará state (Monster)

COLOMBIA

Río Guaviare (Monster)
Río Magdalena (Colombian Saurian)

CUBA

San Miguel del Padron, lagoon near (Monster)

FRENCH GUIANA

Maroni River (Maipolina)

PARAGUAY

Gran Chaco Swamp, Boquerón (Manguruyú)
Río Paraguay (Manguruyú)

PERU

Northwest of Yurimaguas, unnamed lake, Loreto province (Saurian, hoax?)
Los Angeles Lake (Silver Lake Monster)
Río Marañón (Saurian)

TRINIDAD

Ortoire River (Huillia)

VENEZUELA

Auyán Tepuy mesa, unnamed river on, Canaima National Park, Bolívar state. (Monster)
Serranía del Moroturo, unnamed lake, Lara state (Monster, anaconda?)

AFRICA

ANGOLA

Chiumbe River (Lipata)
Cuango River (Coje ya Menia)
Cuanza River (Coje ya Menia)
Lago Dilolo (Chipekwe)
Kasai River (Chipekwe, Lipata)

BENIN

Mekrou River (M'-o-ke'-N'be')
Ouémé River (M'-o-ke'-N'be')

BURUNDI

Lake Tanganyika (Monster)

CAMEROON

Lake Barombi Mbo (Congo Water Dragon)
Boumba River (Mokele-mbembe)
Cross River (Mokele-mbembe)
Dja River (Mokele-mbembe)
Loponji River (Mokele-mbembe)
Mamfe Pool (Mokele-mbembe)
Mbamé River (Mokele-mbembe)
Ntem River (Mokele-mbembe)
Sanaga River (Mokele-mbembe)

CENTRAL AFRICAN REPUBLIC

Bamingui River (Mourou-ngou)
Bangoran River (Mourou-ngou)
Brouchouchou River (Badigui)
Gounda River (Badigui)
Gribingui River (Mourou-ngou)
Iomba River (Mourou-ngou)
Kotto River (Mourou-ngou)
Koukourou River (Mourou-ngou)
Mbari River (Mourou-ngou)
Mbomou River (Miga)
Ouaka River (Mourou-ngou)
Vovodo River (Mgoroli)

CHAD

Lake Chad (Auli)
Chari River (Mourou-ngou)
Dagana marshes (Auli)
Ounianga lakes [Lake Yoan] (Auli)

DEMOCRATIC REPUBLIC OF THE CONGO (ZAIRE)

Aruwimi River (Nyama)
Dilolo Swamps (Chipekwe)

Dungu River (Miga)
Lake Edward (Irizima)
Ikelemba River (Mokele-mbembe)
Lualaba River, lakes near (Nzefu-loi)
Lukuga River (Mamba mutu)
Maika marshes (Mahamba)
Lake Tanganyika (Mamba mutu)
Uele River (Miga)

ERITREA

Mereb Wenz (Auli)

ETHIOPIA

Lake Abaya (Monster)
Lake T'ana (Auli)

GABON

Ngounié River (N'yamala)
Ogooué River (N'yamala)

GAMBIA

Gambia River (Ninki nanka)

GUINEA

Niger River (Miga)

KENYA

Kikira River (Dingonek)
Mara River (Dingonek)
Migori River (Dingonek)
Lake Victoria (Lukwata)

MALAWI

Lake Nyasa (Dzimwé)

NIGERIA

Niger Delta (Mami)

REPUBLIC OF THE CONGO

Bai River (Mokele-mbembe)
Likouala River (Mbielu-mbielu-mbielu, Mokele-mbembe)
Lake Makele (Mokele-mbembe)
Motaba River (Nguma-monene)
Sangha River (Mokele-mbembe)
Lake Tebeki (Mokele-mbembe)
Lake Télé (Mokele-mbembe)
Ubangi River (Mokele-mbembe)

SOUTH AFRICA

Howick Falls, KwaZulu-Natal province (Inkanyamba, Howie)
Mfolozi River, KwaZulu-Natal province (Silwane manzi)
Mkomazi River, KwaZulu-Natal province (Inkanyamba)
Mzintlava River, Eastern Cape province (Mamlambo)
Ngwempisi River, Mpumalanga province (Monster)
Orange River, Eastern Cape and Northern Cape provinces (Groot Slang)
St. Lucia Estuary, KwaZulu-Natal province (Monster)
Umgeni River, KwaZulu-Natal province (Inkanyamba)
Vaal River, Free State province (Groot Slang)

SUDAN

Bahr el 'Arab (Lau)
Bahr al Ghaz'l (Lau)
Bahr al Jabal (Lau)
Bahr al Zer'f (Lau)
Lake No (Lau)

TANZANIA

Mount Meru, lake near (Monster)
Lake Tanganyika (Chipekwe, Pamba)

TUNISIA

Wadi Majardah (Saharan Crested Snake)

ZAMBIA

Lake Bangweulu (Chipekwe)
Bangweulu Swamp (Nsanga)
Lake Chirengwa (Monster)
Lake Ishuku, east of Ndola (Monster)
Kafue Flats (Chipekwe)
Lake Kashiba (Ichitapa)
Luapula River (Chipekwe)
Lukulu River (Chipekwe)
Lake Mweru (Chipekwe)
Lake Shiwa Ngandu (Chipekwe)
Zambezi River (Isiquomadevu)

ZIMBABWE

Lake Kariba (Nyaminyami)

Europe

AUSTRIA

River Glan, Kärnten state (Dragon)
Goggau See, Kärnten state (Monster Fish)
Toplitzsee, Steiermark state (Monster)
Traunsee, Oberösterreich state (Waterhorse)
Urisee, Tirol state (Monster)

BELGIUM

Meuse River, Liège (Maasie)

CROATIA

Soderica lake, near Koprivnica (Monster)

CZECH REPUBLIC

Zachrast'any, East Bohemian region, stream near (Monster)

DENMARK

Furesö, København county (Monster)
River Gudenå, Viborg county (Giant Snake)
Kildevæld, København county (Monster)

ESTONIA

Otepää, Valga county, lake near (Water Horse)
Viitna, Lääne-Viru county, lake near (Monster)

FINLAND

Längelmävesi, Southern Finland (Monster)
Loukusajärvi (Monster)

FRANCE

Lac d'Alfeld, Haut-Rhin department (Monster Fish)
Allier River, near Vichy, Allier department (Monster)
Belchensee, near Grand Ballon, Haut-Rhin department (Dragon)
Huisne River, near La Ferté-Bernard, Sarthe department (Dragon)
Lac Pavin, Puy-de-Dôme department (Dragon)
Rhône River, Provence (Tarasque)
Seine River, Normandy (Gargouille)
Etang de Vaccares, Bouches-du-Rhône department (Monster)
Villesang, Puy-de-Dôme department (Monster)

ITALY

Lago Amadoier (Monster)
Lago di Como, Lombardy (Monster, Sturgeon?, submarine?)
Lago Maggiore, Piedmont (Monster)
Po di Goro, Emilia-Romagna (Monster)
Siracusa, Sicily (Colovia)
Lago Specchio di Venere, Isola di Pantelleria, Sicily (Monster)
Tiber River, Rome (Dragon)
Ticino River, Piedmont (Monster)

NORWAY

Åbborvatnet, Oppland county (Monster)
Åfjordvatnet, Sørøya, Finnmark county (Monster)
Bergsjø, Buskerud county (Monster)
Botnvatnet, Nordland county (Monster)
Ellinggårdskilen, Østfold county (Monster)
Farrisvannet, Vestfold county (Monster)
Finnsnesvatnet, Nord-Trøndelag county (Monster)
Flåvatnet, Telemark county (Monster)
Fossemvatnet, Nord-Trøndelag county (Monster)
Fyresvatn, Telemark county (Gjevstroll)
Gausbuvatnet, Telemark county (Monster)
Hallandsvatnet, Vest-Agder county (Monster)
Holandsvatnet, Nordland county (Monster)
Hornindalsvatn, Sogn og Fjordane county (Monster)
Hvaler, Østfold county (Monster)
Jølstravatnet, Sogn og Fjordane county (Monster)
Krøderen, Buskerud county (Monster)
Krovatnet, Rogaland county (Monster)
Kvalvatnet, near Beiarn, Nordland county (Monster)
Kvitseidvatnet, Telemark county (Monster)
Litledalsvatnet, Hordaland county (Monster)
Loenvatnet, Sogn og Fjordane county (Monster)
Lundevatnet, Rogaland county (Monster)
Mannefjord, Vest-Agder county (Monster)
Mesna, Hedmark county (Monster)
Mjøsa, Hedmark county (Mjossie)

Mosvatnet, Rogaland county (Monster)
Myrkevatn, Møre og Romsdal county (Nykkjen)
Ødegårdskilen, Østfold county (Monster)
Ormsjøen, Hordaland county (Monster)
Osensjøen, Hedmark county (Monster)
Øyvatna, Buskerud county (Monster)
Randsfjorden, Oppland county (Monster)
Rauflovatnet, Nord-Trøndelag county (Monster)
Reinsvatnet, Rogaland county (Monster)
Repstadvatnet, near Søgne, Vest-Agder county (Joh)
Ringsjøen, Hedmark county (Monster)
Rombovatnet, Nordland county (Monster)
Rømsjøen, Østfold county (Rommie)
Sandnesvatnet, Nordland county (Vasstrollet)
Sansavatnet, Rogaland county (Monster)
Selbusjøen, Sør-Trondelag county (Monster)
Seljordsvatnet, Telemark county (Selma)
Setesdal, Aust-Agder county (Monster)
Skodje, Møre og Romsdal county (Monster)
Snåsavatnet, Nord-Trøndelag county (Monster)
Søråsjøen, Hedmark county (Monster)
Sperillen, Buskerud county (Monster)
Storevatn, near Askøy, Hordaland county (Monster)
Stuvsfjordhylen, Vest-Agder county (Monster)
Suldalsvatnet, Rogaland county (Monster)
Sundsbarmvatnet, Telemark county (Monster)
Tinnkjødnet, in the Deblemyren, Vest-Agder county (Joh)
Tinnsjøen, Telemark county (Monster)
Torfinnsvatnet, near Voss, Hordaland county (Monster)
Tyrifjorden, Buskerud county (Monster)
Vangsmjøsa, Oppland county (Monster)
Vangsvatnet, near Bruvik, Hordaland county (Monster)
Varejell, Møre og Romsdal county (Lindorm)

POLAND

Jezioro Zegrzynskie (Monster)
Sierniki, stream near (Monster)

RUSSIA

Lake Brosno Tver' region (Brosnie)
Velikaya River, Pskov region (Pskov Crocodile)

SPAIN

Lago de Bañolas, Catalonia (Dragon)

SWEDEN

Åmänningen, Västmanland county (Monster)
Asnen, Kronoberg county (Lindorm)
Bullaresjön (Norra), Västra Götaland county (Monster)
Fegen, Jönköping county (Monster)
Gryttjen, Gävleborg county (Gryttie)
Helgasjön, Kronoberg county (Lindorm)
Lickasjön, near Motala, Östergötland county (Monster)
Lilla Kallsjön, Jämtland county (Water-bull)
Lilla Värtan, Stockholm county (Monster)
Mälaren, Stockholm county (Nycker)
Malgomaj, Västerbotten county (Monster)
Mjörn, Västra Götaland county (Monster)
Myllesjön, Blekinge county (Monster)
Öjen, Kronoberg county (Lindorm)
Råsvalen, Örebro county (Rassic)
Regnaren, Gävleborg county (Monster)
Rensjö, Dalarna county (Monster)
Rottnen, Kronoberg county (Lindorm)
Salstern, Östergötland county (Monster)
Slagnässjön, Blekinge county (Monster)
Stensjön, Östergötland county (Monster)
Store Le, Västra Götaland county (Giant Catfish)
Storsjön, Jämtland county (Storsjoodjuret, Storsie)
Svartsjön, Dalarna county (Monster)
Svarttjärn, Varmdolandet, Stockholm county (Monster)
Tavelsjön, Västerbotten county (Monster)
Tingstäde Träsk, Gotland county (Monster)
Torneträsk, Norrbotten county (Monster)

Västjuten, Östergötland county (Dragon)
Vättern, Västra Götaland county (Monster)
Vojmsjon, Västerbotten (Monster)

SWITZERLAND

Doubs River, Canton Jura (Vouivre)
Lake Geneva, Canton Vaud (Monster)
Reuss River, Canton Luzern (Dragon)
Rotsee, Canton Luzern (Monster)
Schwarzsee (Waterhorse, Water-bull)
Selisbergsee, Canton Uri (Elbst)
Urnersee, Canton Schwyz (Monster, hoax?)
Walensee, Canton Sankt Gallen (Monster Fish)
Zugersee, Canton Zug (Monster Fish)

UNITED KINGDOM

England

Bomere Pool, Shropshire (Monster Fish)
Haslar Lake, Gosport, Hampshire (Giant Eel)
Norton Mere, Shropshire (Monster)

Northern Ireland

Lower Lough Erne, County Fermanagh (Péist)
Lough Foyle, County Londonderry (Péist)
Lough Melvin, County Fermanagh (Péist)
Lough Neagh, County Antrim (Péist)
Lough Rudraige, County Down (Léti)

Scotland

Loch Achanalt, Highland (Monster)
Loch a' Mhuillidh, Highland (Beithir)
Loch Arkaig, Highland (Archie)
Loch Assynt, Highland (Monster)
Loch Awe, Argyll and Bute (Monster)
Loch Brittle, Skye, Highland (Monster)
Cauldshiels Loch, The Borders (Waterhorse, Water-bull)

Loch Dochfour, Highland (Nessie)
Loch Duich, Argyll and Bute (Monster)
Loch Duvat, Eriskay, Western Isles (Waterhorse)
Loch Eil, Highland (Monster)
Loch Feith an Leothaid, Highland (Monster)
Loch Fyne, Argyll and Bute (Monster Fish)
Gare Loch, Argyll and Bute (Waterhorse)
Loch Garget Beag, Highland (Waterhorse)
Loch Garten, Highland (Waterhorse)
Loch Glass, Highland (Waterhorse)
Loch Hourn, Highland (Monster)
Loch Leurbost, Lewis, Western Isles (Monster)
Loch Linnhe, Highland (Monster)
Loch Lochy, Highland (Lizzie)
Loch Lomond, Argyll and Bute (Monster)
Loch Lurgainn, Highland (Kelpie)
Loch Meiklie, Highland (Kelpie)
Loch Morar, Highland (Morag)
Loch na Beiste, near Greenstone Point, Highland (Monster)
Loch na Mna, Raasay, Highland (Waterhorse)
Loch nan Dubhrachan, Skye, Highland (Waterhorse)
Loch Ness, Highland (Nessie)
Loch Oich, Highland (Wee Oichy)
Loch Pityoulish, Highland (Waterhorse)
Loch Poit na hI, Mull, Argyll and Bute (Monster)
Loch Quoich, Highland (Monster)
Loch Rannoch, Perthshire and Kinross (Monster)
Loch Scavaig, Skye, Highland (Monster)
Loch Shiel, Highland (Seileag)
Loch Suainaval, Lewis, Western Isles (Monster)
Loch Tay, Perthshire and Kinross (Monster)
River Tay, Perthshire and Kinross (Monster)
Loch Treig, Highland (Waterhorse)
Loch Urabhal, Lewis, Western Isles (Monster)
Loch Venachar, Stirling (Waterhorse)
Loch Watten, Highland (Monster)

Wales

Llyn yr Afanc, Betws-y-coed, Conwy (Afanc)
Bala Lake (Llyn Tegid), Gwynedd (Teggie)
Llyn Barfog, Gwynedd (Afanc)
Llyn-y-Cae, Gwynedd (Afanc)
Llyn Cowlyd, Conwy (Waterhorse)
Llyn Cynwch, Gwynedd (Wyvern)
Llyn Eiddwen, Ceredigion (Monster)
Llyn Fanod, Ceredigion (Monster)
Llyn Farch, Ceredigion (Monster)
Llyn y Gadair, Gwynedd (Monster)
Llyn Glaslyn, Powys (Afanc)
Llyn Llangorse, Powys (Monster)
Marchlyn Mawr, Gwynedd (Monster)

YUGOSLAVIA

Carska bara, Serbia (Monster)

Asia

BHUTAN

Jigme Dorji National Park, lake in (Monster)

CHINA

Lake Changhai [Long Lake], Sichuan province (Monster)
Chon-Ji Lake [also called Tian Chai, Changbai, or Dragon Lake], Jilin province (Guai wu)
Er Hai Lake, Yunnan province (Monster)
Lake Hanas, Xinjiang Uygur autonomous region (Giant Salmon)
Jianzhuhai Lake, Sichuan province (Monster)
Nuorilang Lakes, Sichuan province (Monster)
Wuhan, lake near, Hubei province (Giant Toad Monster)

INDIA

Apa Tani Valley, Arunachal Pradesh union territory, lakes in (Buru)
Dafla Hills, Arunachal Pradesh union territory, lakes in (Buru)

INDONESIA

Danau Poso, Sulawesi (Monster)
Lake Patenggang, southwest of Bandung, Java (Monster)
Danau Tawuti and other lakes of Sulawesi (Sulawesi Lake Crocodile)

IRAQ

Tigris River (Afa, Anfish)

ISRAEL

Sea of Galilee (Crocodilian Monster)

JAPAN

Chózenji-ko, Tochigi prefecture, Honshu (Monster)
Ikeda-ko, Kagoshima prefecture, Kyushu (Issie)
Kussharo-ko, Hokkaido prefecture (Kushi)
Sarugaishi-gawa, Iwate prefecture (Kappa)
Tōya-ko, Hokkaido prefecture (Monster)

KAZAKHSTAN

Lake Kök-Köl (Aidakhar)

KYRGYZSTAN

Lake Sary Chelek (Monster)

MALAYSIA

Lawas River, Sarawak state (Monster, Dugong?)
Tasek Bera, Pahang state (Ular Tedong)
Tasek Chini, Pahang state (Monster)

MONGOLIA

Socho-nor (Water-cattle)

NEPAL

Lake Taudaha (Karkotak Naag)

SIBERIA

Lake Khaiyr, Sakha republic (Monster)
Lake Labynkyr, Sakha republic (Monster, Northern pike?)
Sharypovo, lake near, Krasnoyarsk territory (Monster)
Lake Toni, Primor'ye territory (Giant Snake)
Lake Vorota, Sakha republic (Monster)

TIBET

Lake Duobuzhe (Hippoturtleox)
Lake Wenbu [also Wembo or Menbu] (Monster)

TURKEY

Erçek Gölü, Van province (Teggie)
Euphrates River (Nhang)
Murat Nehri River (Nhang)
Van Gölü, Van Province (Canavar, Canavan)

VIETNAM

Hoàn Kiem Lake, Hanoi (Hoàn Kiem Turtle)
Mekong River (Monster)

Australia/Oceania

AUSTRALIA

New South Wales

Lake Bathurst (Bunyip)
Boobera Lagoon (Kurrea)
Lake Burley Griffin, A.C.T. (Wake?)
Lake Cowal (Bunyip)
Fish River (Bunyip)
Lake George (Bunyip)
Goulburn River (Bunyip)
Hawkesbury River, headwaters (Monster)
Lachlan River (Bunyip)
Lake Macquarie (Wouwai, Bunyip)
Macquarie River (Bunyip)
Midgeon Lagoon, Narrandera (Waa-wee)
River Molonglo, A.C.T. (Bunyip)
Murray River (Bunyip)
Murrumbidgee River (Bunyip)
Narrabeen Lakes (Bunyip, hoax?)
Paika Lake (Bunyip)
Queanbeyan River (Bunyip)
Lake Tarla (Bunyip)
Tuckerbil Swamp, near Leeton (Bunyip)
Wingecarribee River (Bunyip)

Northern Territory

Gudgerama Creek (Mannie or Manin1grida Monster)

Queensland

Burrum wetlands (Bunyip)
Condamine River (Mochel Mochel)
Dynevor Lakes (Bunyip)
Gap Creek (Mochel Mochel)
Merrimac Swamp (Bunyip, crocodiles?)
Nerang River (Bunyip)

South Australia

Lake Alexandrina (Moolgewanke)
Crystal Brook (Bunyip)
Diamantina River (Kuddimudra)
Lake Eyre (Kadimakara)
Mount Gambier, lagoon on (Bunyip)
Mount Remarkable, waterhole near (Bunyip)

Tasmania

Lake Echo (Bunyip)
Great Lake (Bunyip)
Jordan River (Bunyip)
Lake Tiberias (Bunyip)

Victoria

Lake Albacuytya (Banib)
Barwon River (Bunyip)
Lake Burrumbeet (Bunyip)
Lake Corangamite (Bunyip)
Eumeralla River (Bunyip)
Euroa, swamp near (Bunyip)
Fiery Creek (Bunyip)
Lauriston Reservoir (Bunyip)
Lismore, private lagoon north of (Bunyip)
Little Murray River (Bunyip)
Malmsbury Reservoir (Bunyip)
Lake Modewarre (Bunyip)
Port Phillip Bay (Tunatpan)
Lake Werribee (Bunyip)

Western Australia

Swan River (Bunyip)

NEW GUINEA

Fly River, Papua New Guinea (Mystery Stingray)
Lake Murray, Papua New Guinea (Au Angi-angi)
Lake Sentani, Irian Jaya, Indonesia (Lake Sentani Shark)

NEW ZEALAND

Aparima River (Waitoreke)
Ashburton River (Waitoreke)
Lake Ellesmere (Waitoreke)
Lake Hauroko (Waitoreke)
Lake Heron (Waitoreke)
Hollyford River (Waitoreke)
Marokopa River (Monster)
Lake Taupo (Monster)
Waikato River (Taniwha)
Whanganui River (Taniwha)

NEW BRITAIN

Lake Dakataua (Migo)

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